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Farm Department.

Conducted by J. H. Brown, who lives on his farm at Climax, Mich., which is conducted as the Michigan Farmer Experiment Farm. All correspondence for this department should be sent to Climax, Mich.

THE EDITOR'S FARM NOTES.

SOWING CLOVER SEED.

There is hardly any single job on the farm that we usually perform in such an unsatisfactory manner, in our opinion, as this one of sowing clover seed, in early spring, on wheat ground.

Ever since the last deep snow began to disappear, we have watched for that ideal "honey-combed surface," and a quiet morning, but it has failed to put in an appearance, so far.

The 20-acre field of wheat, to be seeded down, is quite rolling in places and of a mixture of sand and clay loam. Under these conditions we have been sowing clover seed this morning. The snow is all gone and it does not even freeze at night. There is no frost in the ground, and the surface is dry enough to walk over without rubbers.

In portions of the field the soil is heavy clay and full of "cracks." On the lighter portions very few cracks are visible. As it is now the middle of March we decided to sow without the cracks or honey-combed surface.

We believe in early sowing, but there is some danger in sowing this field as we have this forenoon. The seed practically all lies loosely on top of the surface soil, though of course some seeds fell or rolled into the little crevices.

If a heavy or dashing rain should fall within a day or two, much of this seed would be washed away, or distributed so unevenly over the field as to make the seeding almost a failure.

As the conditions were this morning, we would naturally decide to wait until the surface soil became dry enough to drag with a slanted spike-tooth harrow. Why did we not?

We seeded this field to timothy last fall, at the same time of sowing wheat, instead of waiting until ten days or two weeks later. The new grain drill was arranged with tubes set to distribute the timothy seed ahead of the hoes. This covered the timothy seed more than usual and delayed its appearance as a growing plant among the young wheat. Consequently we did not expect the timothy to get much of a start last fall and choke the wheat, as it usually does when sown at the time of wheat seeding.

A day or two ago we walked over this field and found the young timothy nicely started and almost as "thick as hair," not on a bald head, but "on a dog."

It seemed like assuming considerable risk to wait a few days longer, then sow the clover seed and harrow in. If this experiment was tried, would it not destroy a goodly portion of the young timothy? Especially as

the job must be done when the surface soil is at least moderately dry.

However, in order to test the matter, we shall leave a narrow strip, sow to clover a few days later, when we have a favorable opportunity, then drag with a spike-tooth harrow and roll down immediately. If the timothy "pulls through" all right, it will assure us of what we more than half surmise, that even young timothy can stand a "harrowing scene" better than we can. Under such circumstances, we may arrange to be away from home upon pressing business when the experiment is made, after giving strict orders to the operator not to back out of his job.

If the field had not been seeded to timothy last fall, we should now harrow the wheat anyway, for repeated experiments have shown us that it pays to stir the soil among the wheat plants, especially in the spring as soon as the ground is settled. This same harrowing would also help cover the clover seed.

As to just how and when all the above mentioned work should be done, to secure best results, no one of us does, or ever will know. With constantly and ever varying conditions to meet, of which we cannot foretell, we must do the best we can with what we have in hand.

This season we have made up a three-bushel mixture of clover seed as follows: Two bushels June or medium red, and one-half bushel each of mammoth and alsike clover. There is actually 19 acres of ground to be covered with this seed.

It seems to us as though a drill attachment for sowing clover seed, to small tubes and slender, sharp-pointed convey the seed to the soil through hoes, could be devised and attached to our ordinary grain drills. Then we could sow our clover seed and have every kernel lightly covered with soil. With such an attachment we could sow our clover seed to-day, among the wheat plants and young timothy, cover the clover seed, and the agitation of the soil would be beneficial, rather than detrimental, to the wheat.

ROOTS FOR FEEDING STOCK IN WINTER.
What variety of roots do you prefer for feeding stock in winter?

Also, would like to know what variety of corn to plant for silage.
Kalkaska Co., Mich. P. M. LOSSING.

We do not feed roots. Should prefer mangel wurzels and rutabagas for general stock feeding. Should prefer to feed no bagas to milch cows.

Plant that variety that is natural or acclimated to your section or corn belt. The best corn for silage is that field corn that will contain the largest per cent of digestible nutrients at the time of cutting and filling the silo. Hence it must be corn that will mature before frost kills it. Immature corn does not make good silage, as a general thing.

SEEDING MUCK LAND.

What is the best grass or grass mixture to sow on muck land? It is

well drained and is not very often covered with water.

St. Joseph, Mich. GEO. J. LANG.

Try red top, timothy and orchard grass. See recent issues. If water stands on the surface periodically, the seeding will be more or less of a failure.

WANTS A NEW TOOL.

I must buy a new tool soon, and I hardly know what to buy that will do the most work for the least money invested.

I think we should discuss the merits and faults of the different tools through *The Farmer*, and thus help those who are intending to buy, and save them perhaps from buying a tool which they would not be pleased with after using.

READER.

Send us a description of the needs and uses to which the tool will be put, and then we will try to help you out. If it is a general purpose harrow, some style of a spring tooth will fill the bill better than anything else.

For *The Michigan Farmer*.
MANURE AND RYE ON SANDY LAND.

There has been so much said about manure I think I ought to let the farmers know about my plan.

It must be remembered that I am only an amateur farmer, but I have had a great deal of experience with manure, as the farm we live on was very poor when we bought it.

Our friend and neighbor, A. J. Lapham, suggested that we haul manure from the city to put upon our corn ground. This was in 1895, and we commenced to draw manure.

We live three miles from the city, and we used to make two trips a day, and sometimes we would make three trips. We got all the manure we could draw for the cleaning of the yard, and to keep it cleaned up all the year. We soon found we could cover over quite a large field in the winter, so we laid out about four acres to cover that winter.

When we came to plow for corn we found we had put on so much coarse straw and other matter that it was almost impossible to plow it under. It was very dry that year, so we did not get much good from our winter's work, but the next year we had a very large crop of corn on this same field.

We kept on drawing until we had covered about eight acres, and we spread it as fast as we hauled it. Last June we commenced to cover a field where we intend to plant corn this season. This field has about five and a half acres in it, and last week we finished it, and some of it we covered twice—a gravel hill—where we could not grow anything.

This was the first we covered, and after about six weeks we went over it again and put fine manure upon it a second time. Then the weeds began to grow and in September we had to cut them down with the mower to prevent them from going to seed. We hope to have good corn on this hill,

where heretofore there has never been anything—not even weeds.

There has been a great deal said about spreading manure when it is hauled out. When at our farmers' institute, this was one of the main questions, and it was almost the unanimous verdict that it was best to spread as fast as drawn.

In riding around the country I see large piles of stable manure around the barns, and say to myself: "I wish I had those large piles to haul out on my farm." It seems to me that farmers are making a mistake in not drawing out their manure in the winter, and save the time, as it must take some days to draw out some of the piles that are around some of the barns in this section.

Last year I had about three acres which I had sowed to rye. It was thick, and the neighbors said it would not amount to anything, so I thought I would plow it under and perhaps I would get a little good from it.

It was so big I had to use a chain to get it into the furrow. I fitted it as best I could and sowed it to fodder corn. Such corn! We had eight big loads of corn fodder off the three acres, and it was of the best quality and had lots of small ears upon it, which the stock liked very much.

I have sowed the same patch to rye again, and I think I shall plow it under and sow to corn again this year. This field we have never put any manure on, and it is hard to draw to this field on account of a hill we would have to draw up.

What do you think, Mr. Editor; was the plowing under of the rye a good plan? or should we have cut it, and then plowed it, and would you advise us to plow under the rye the present season, same as last year? Could we get this field into good fertile condition by turning under rye every year?

We do not have much stock, and have to draw most all our manure from the city. In the near future we will tell you how we succeed in making butter, and how we sell it.

Calhoun Co., Mich. C. L. HOGUE.
(Being acquainted with friend Hogue's surroundings, soil and conditions, we think his plan of hauling manure from the city is the best he can devise.

He has the time during the winter to haul this manure, and it furnishes just what he needs most on his farm—plenty of humus or vegetable matter.

As to plowing under the rye, he takes some risk in letting it get so near maturity before turning under. During a dry season the straw would arrest capillarity, and cause a failure in the growth and maturity of the crop planted on the furrows above.

We advise turning the rye under before it heads out, and this will allow him to put in the drilled corn somewhat earlier, thus making an available soiling crop much sooner than under last season's plan.

The plan of keeping some crop grow-

ing on the land is a good one. But get a good coat of manure on this field soon as possible. Is our advice, then put the field into a regular rotation.—Ed.)

For The Michigan Farmer.

SUB-AIR DUCT FOR CELLAR.

I am about to remodel my cellar, and am located on a bank where about five rods from my house the ground descends quite fast, so that in seven or eight rods it is below the bottom of the cellar.

The outlet is still several feet above the flats, where the air is pure. Would it be any advantage to put in large tile and let fresh air into the cellar? In that distance would it cool the hot air in summer and keep out frost in winter?

What size of tile would it require for a large cellar?

Wayne Co., Mich.

READER.

(If the job costs little, by doing the work yourself, we should be inclined to try the experiment anyway. Four or six-inch tile would be preferable, in our opinion. The ventilation would be improved, and you could secure a more equable temperature.

The opening into the duct or tile, from near the cellar-bottom, should be arranged with an air-tight, adjustable trap or valve, so that you can control both temperature and air circulation at any time.

The proper way to cool the cellar in warm weather would be to open the corridors and air duct at night, then close them in the morning. The cellar should be built frost-proof, anyway, and we should place no dependence on this air duct for winter operations.

We may be partially wrong in the above assumption, having had no actual experience, but hope to hear from some brother farmer who has made an actual experiment along this line. Sub-earth air ducts are used successfully in some cheese curing rooms for securing an equable temperature and controlling amount of moisture.—Ed.)

For The Michigan Farmer.

UNDERTAKING TOO MUCH—A RETROSPECT.

At the close of the last growing season my son and myself discussed the season's operations and concluded that we could truthfully assert that we had had no serious losses from neglecting to attend to growing crops at the right time. The nearest we came to failure from too little care was in field corn and early potatoes, and in both instances too much rain at the critical time delayed us.

It is easy to write as some do about taking time by the forelock, and using the weeder and smoothing harrow while the weeds are sprouting, but it is not so easy to practice when continual rains make the valleys in a corn field a quagmire and absolutely forbid doing anything, until both weeds and corn are so far along that nothing but hand hoeing will clean up the rows. At such times one wishes the corn was in check rows, but as my gardening and berry growing makes long, narrow strips most desirable my corn is drilled and I have quit dreaming over what might be if my fields were large and square.

It was a very poor season for early potatoes and most of my acquaintances made a total failure, so I was glad to figure up \$125 as the receipts from two and a half acres. The very poor yield was partially made up by good prices, all selling for from 60 to 100 cents per bushel. There was, however, quite a pleasant sequel to this amount received from sales. I was very busy all summer, being on the wagon from three to six days in the week, and having some literary and other special work which gave me little time to mourn over spilled milk. And when the boys told me that they had dug all of the New Queen that were worth digging I did not investigate, but told them to tackle the Rurals.

Owing to the unprecedented late fall, giving ripe tomatoes, lima beans, and sweet corn until Oct. 28th, I was kept busy going to market, and then we had a few apples to market, and the late potatoes, so I did not investigate the New Queens until about the middle of November. I then took a potato hook and a couple of bushel crates, thinking I would hunt a few (to keep the variety), out of the rank growth of late summer grass, which grew after the crop was laid by. I

found that there were quite a lot of rows which the boys had left, amounting to probably twenty or more bushels.

My son was busy husking corn which he wished to get done before Thanksgiving, so I kept at the digging alone and finally succeeded in getting out 51 bushels of pretty fair potatoes. All would do for seed in a scarce year, and more than half were of good eating size. As almost everybody ate all their very early potatoes down to the size of marbles, I have but little doubt that early seed will command a dollar and perhaps more, so what the boys did not consider worth digging made a comfortable addition to the receipts from the early potatoes. Owing to the acknowledged scarcity of early potato seed and the probability of good prices all through July and part of August, I shall plant all my seed, making special arrangements for plenty of help during the "buggy" period in June.

EXTRA HELP IN HARVEST TIME.

The failure to plan for sufficient help, or what amounted to the same thing, undertaking too many crops, was a besetting sin in my section the past summer. One man with forty acres of wheat in-sight, and about the same acreage of oats and corn to put out, and only four horses and two hired men, put out three acres of potatoes, 70,000 cabbages, and some other garden truck. The bugs got all the potatoes except eight bushels, and lack of tillage and neglect got away with a good many cabbages, thousands of heads not getting to any size.

I was on another farm about the middle of June which was literally groaning with the crops of hay, wheat and rye. Said I to the owner, you ought to have another man right away; it will be impossible for you, with your present force, to manage your large butter dairy, go to market every Saturday, and do justice to all this work. He said he guessed he had his hands full, but it would not pay to put all the profits into labor.

The result was that only four rows of more than an acre of potatoes got worked, the large garden became over-run with weeds, so that I sold him tomatoes, cabbage and other vegetables to use, and part of his corn was worked once. The year before he sold more than \$20 worth of vegetables to his butter customers, and judging his potato crop by the four rows which were worked, he lost not less than \$75 on potatoes. Here was the best part of \$100 from failure to have an extra hand for a few weeks.

Ohio.

L. B. PIERCE.

(There is much truth in what friend Pierce says about having plenty of help when a diversity of crops and the haying and harvest season comes on. It is a serious time on many farms.

In our section it is almost impossible to get extra help at such a time, especially help that is good for anything. Many men "lie around" the towns and villages, with nothing to do, and not a cent in their pockets. The majority of them will not work on a farm, unless for short hours and long pay. Very few such are worth their board and lodging.

The only thing they are "expert" in is working their mouths, and the only thing they believe in is the stiffest kind of a "union labor" organization. These men would do fairly well as "walking delegates," except they would hate to walk much, and they are a species of anarchist, so far as their religion is concerned.

This may be strong talk, but it is true of many of the shiftless characters who hang around our small towns and cities, and are expected to do a little work "by the day" for the farmer during the haying and harvest season.—Ed.)

WHAT EUROPEAN AGRICULTURISTS ARE DISCUSSING.

From Our Paris Correspondent.

The Congress of French Agriculturists is now in session—the week preceding the annual agricultural exhibition on the Champs de Mars, for all France—and which, be it observed in passing, promises to be very brilliant. The president of the agriculturists' society, the Marquis de Vogue, had only congratulations to express to his auditors; the farmers had obtained from parliament all they desired; an augmented bounty had been added for the exportation of sugar—to supply English consumers with an article four times cheaper than can be had by French consumers themselves; the dealings in fictitious stocks of grain

had been stopped, and the "Cadena" law prevented grain rings and the rigging of the home cereal markets. Land taxes were reduced for small occupiers as far as the wants of the revenue would admit, while duties on importations detrimental to French outputs, had been increased—live stock and prepared meats in general. French farmers need not hence dream of Klondike.

Sugar is a substance as necessary for life, that is for alimentation, as bread and meat. Prejudice up to the present rules that sugar is only a condiment, like pepper, salt, spices, etc., useful as seasoning. Germany is experimenting in the employment of sugar in the feeding of her soldiers. She is also experimenting with the molasses, next to a waste product, from the beet sugar mills, in the feeding of farm stock, for Germany turns out annually one-fifth of the world's sugar crop. Nor has the question been overlooked in France, though not studied as it will be, for in the consumption of their sugar lies the escape of the French from the terrible bounty tax. M. Bernard, of Coupvray (Seine-et-Marne), buys poor, cheap wheat, grinds it, mixes it with bran, and adds one-third part of beet sugar treacle or molasses; kneads the mass, and bakes it into a kind of ginger-bread looking aliment. It stores well, escapes all attacks from insects and vermin, and can be readily transported any distance. Year after year he feeds his live stock with his "cakes"; the daily ration is for oxen and milch cows, 6½ to 11 pounds; 2¼ to 4½ pounds for horses, 2 pounds for sheep and half that quantity for lambs. It is a cheap diet and highly relished. In southern Russia farmers dissolve the molasses in lukewarm water, pour it over chopped hay, and give the mass to the cattle. It replaces in part oil cake, and the stock are never attacked by any disease. M. Bernard finds the employment of molasses corrects the debilitating effects of a too aqueous food. Germany does not see her way clearly in the matter so far, the expense of working up the molasses being too high. This difficulty has induced Dr. Ramm, of Bonn, to experiment upon twelve milch cows at Poppelsdorf for four months, ending April, 1896. Molasses were employed with six substances as forage, in which peat or turf, reduced by patent machinery to an impalpable powder, was included; then came palm oil seeds, palm oil cake, potato pulp from the fecula mills, sliced mangels and crushed barley. In addition to the molasses ration all the animals received chopped hay and sliced mangels. The dose of molasses was in the ratio of 18 pounds per ton of live weight. Excepting the potato pulp all the animals took fairly to the preparations. The action of the molasses with turf powder and palm seeds was not satisfactory; except when fed with molasses and sliced mangels, all the cattle diminished a little in weight. The barley compound induced a greater richness of milk. Moreover, when beet sugar was employed the results did not differ from the molasses. The latter then, as employed in southern Russia, or mixed with sliced mangels, realized the ends aimed at. No increase took place in the sugar of milk, nor was any taste of a disagreeable nature imparted to the milk or butter. Neither did the mixture in any way affect cows in calf, or near calving, or after calving.

Economy of Production.

The farmer has not been slow to note that his profits have maintained a fixedness or increased just in proportion as he has been able to reduce the cost of production. All machines which in any way serve to obliterate partially or entirely the always expensive hand labor have been a boon of priceless value to the man who digs his wealth from the soil. Among such machines we know of none which has proven more effective in results than the Aspinwall Potato Planter, a cut of which we show on this page, and which is manufactured

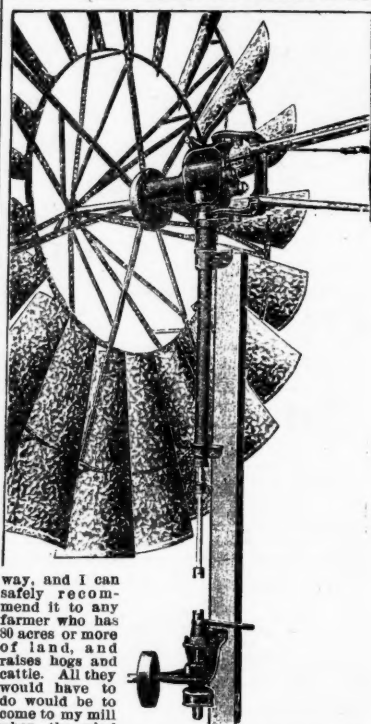


by the Aspinwall Mfg. Co., of Jackson, Mich. Many of our readers are owners of this machine and we know they will agree with us when we say that its use has made a successful art of potato growing. Under the proper conditions it will do the work of about 8 men, opening the furrow, dropping the seed at the desired interval, filling up the furrow again, covering the seed with great evenness and marking out the next row all at one operation. The evenness and uniformity with which the whole operation is performed aids very materially in the growth of the crop.

Eureka Power Windmill.

The following illustration represents something entirely different from any other power windmill produced to-day. Intending purchasers will do well to write manufacturers for their catalog.

BLOOMINGDALE, Mich., Sept. 30, 1897. GENTLEMEN:—Inclosed find draft for balance due on 13 ft. power Eureka Steel Windmill and Grinder. I have just finished putting in elevators and corn sheller. I can safely say it is a success in every

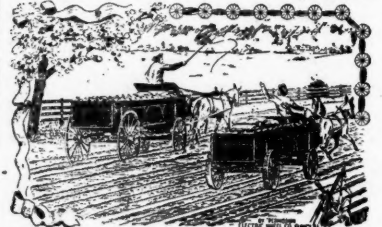


way, and I can safely recommend it to any farmer who has 30 acres or more of land, and raises hogs and cattle. All they would have to do would be to come to my mill when the wind blows and see it run. It takes nearly one-half less grain to feed stock after being ground. Does it pay to grind feed? I say, yes. You can figure the expense of going to the mill, shrinkage of grain and the money you pay for grinding, and your mill is soon paid for. We started our mill to grinding just at harvest time, and we have ground about 500 bushels; and we shall grind about 2,000 bushels of our own grain in this year, say nothing about what we can grind for the neighbors if they want us. Please send the doubtful ones to me and I can soon convince them. Very respectfully, J. T. ROBINSON.

Good Roads Will Save You \$4,500,000 Annually.

The average cost of moving a ton one mile over our country roads is 25 cents, and to move a ton ten miles would cost \$2, or 20 cents per mile, and this does not include the driver's time. It is fair to say that the saving made by good roads in a few years would be sufficient to give every farmer an asphalt pavement from his front door to the nearest market.

The total amount of farm products sold in this country annually is about \$3,000,000,000 and the amount of purchases made by the farmer is about \$1,500,000,000, hence good roads will save 10 percent on



these amounts or \$4,500,000 annually to the American farmer. The best road machines in the world are wide tires. They take the place and render almost unnecessary the road scraper, etc. The narrow tires cut the best road to pieces in a short time and make the bad roads worse. The wide tires improve and preserve the good roads and make the bad roads into first-class highways.

Elaborate tests of the draft of wide and narrow tired wagons have just been completed by the Missouri Agricultural College Experiment Station, Columbia, extending over a period of a year and a half. Contrary to public expectation, in nearly all cases draft was materially lighter when tires six inches wide were used than with tires of standard width. The load hauled was in all cases the same, and the draft was most carefully determined by means of self-recording dynamometer. The beneficial effect of the wide tire on dirt roads is strikingly shown in some recent tests at the station. In a trial, when a clay road was so badly cut into ruts as to be almost impassable for light vehicles and pleasure carriages, after running the six-inch tires over this road twelve times the ruts were completely filled and a first-class bicycle path made.

Put wide tires on your wagon. You can buy wheels of steel or wood to fit your wagons with these wide tires at reasonable price, and the Electric Wheel Co., of Quincy, Ill., who have kindly loaned the cut shown in this article, have a book called "Preservation of Farm Profits," which they send free to anyone upon application, which is full of information on this subject.

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FAVORABLE CONDITION OF THE ANIMAL INDUSTRY.

The statistician of the U. S. Department of Agriculture has given out some interesting figures regarding the present status of the live stock industry in the various states. The statistician says that during 1897 the farm horses of the country increased in value over \$25,000,000, the mules over \$6,000,000, milch cows over \$65,000,000 other cattle over \$104,000,000, sheep over \$25,000,000 and swine over \$8,000,000—making a total increase of farm stock during the year of more than \$236,000,000. Reports from all over the country show the remarkable increase to be well distributed. There is not a single state or territory in the union that does not report an increase in the average farm price per head of cattle and sheep, and in most cases such increase includes all farm animals. In Georgia the total value of farm animals increased during 1897 \$3,000,000; in Pennsylvania nearly \$7,000,000; in Ohio, over \$10,000,000; in Kansas over \$20,000,000, and in Nebraska over \$22,000,000, the increase in Kansas and Nebraska being in the single year, 24 and 41 per cent respectively.

The following table gives the totals of the Department's estimates of the number and value of the live stock in the country, and the average price per head:

	Number.	Average per head.	Total valuation.
Horses	13,960,911	\$34.26	\$478,302,407
Mules	2,256,565	43.86	99,132,062
Milch cows	15,840,886	27.45	434,813,828
Oxen, etc.	29,264,197	20.92	612,296,634
Swine	39,753,963	4.39	174,531,409
Sheep	37,656,960	2.46	92,721,133

A great variation is shown in the figures by different states, both as to the number, of course, as well as the average value per head. Massachusetts, for instance, has 63,162 horses, with a total valuation of \$4,001,549, whereas Vermont has 85,669 with a total valuation of only \$3,781,069. The average price per head in Massachusetts is thus \$63.35, against \$44.14 per head in Vermont. In Rhode Island the average is \$78, the highest of any state. Illinois has the greatest total value, \$37,519,129, although her average value per head is only \$36.05. She has 1,040,767 horses. Texas, with 1,148,500, has the greatest number of horses, but as their average value is only \$17.30, her total valuation is comparatively small, being \$19,866,178.

The figures on the number and prices of mules show the favor these animals find in the South. Georgia, for instance, has but 111,380 horses, valued at \$5,077,000, against New York's 608,916 horses, valued at \$33,060,000, but she has 165,202 mules, valued at \$10,691,000, against 4,511 mules for New York, valued at \$262,746. Wisconsin has less than 5,000 mules, but South Carolina has 98,340, valued at \$61 each, and representing \$6,024,000. Texas has the greatest number, 265,249, valued at \$8,214,000.

In milch cows New York takes the lead, having 1,402,164, valued at \$44,869,248, with an average of \$32. Pennsylvania has 928,905, with an average value of \$29.60—total \$27,495,000. Massachusetts has 174,554, with an average value of \$32.60. Rhode Island again averages the highest, with \$34, although she has but 25,258 milch cows.

In oxen and cattle other than milch cows, Texas takes the lead both as to number and aggregate value. She has 4,823,295, at an average value \$15.27, and a total value of \$73,639,656. Rhode Island again has the highest average value, \$30.18, and has 10,676 of such animals. Massachusetts has 74,134 at an average value of \$25.82. Pennsylvania has 550,981, with an average value of \$23.64. Kansas and Iowa have each above 2,000,000 such animals and Illinois, Missouri, Nebraska and Montana above 1,000,000 each.

In sheep there is even more variation in the prices than in other articles. The far western states have the advantage in numbers but the eastern and middle states in average values. Montana has the largest number, while New York has the highest value per head. New York has \$25,446, worth \$3,332,729, the average value being \$4.04. Montana has \$3,247,641, with a total value of \$7,804,081, and an average

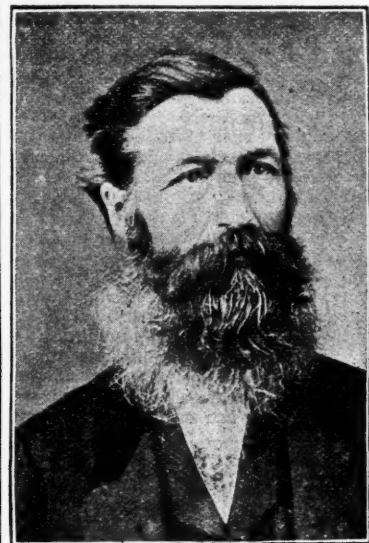
value of \$2.40. Ohio, however, has a combination of numbers and values which carries her total valuation to \$8,274,777. Her sheep are worth each an average of \$3.42, and she has 2,516,346 of them. The Oregon sheep are worth only \$1.63 per head, while those of Alabama are still lower, being \$1.20 each.

In hogs the variation in prices is also very great, ranging from \$2.13 for the average Florida razor-back to \$9.83 for the Connecticut porker. Iowa takes the lead both as to number and total valuation, having 3,635,831 animals valued at \$21,704,225 with an average value of \$5.99 per hog. Pennsylvania has 1,033,001 averaging \$6.78 each. Nevada has the lowest total, having only 11,000 hogs, averaging \$3.94 in value each.

MICHIGAN'S LIVE STOCK.

NOTED MEN INTERESTED IN ITS IMPROVEMENT.

This week we present a portrait of Mr. James T. English, president of the Michigan Red Polled Cattle Breeders' Association.



James T. English was born in Orange county, Vermont, June 23, 1829, and came to Michigan with his parents in 1840, it taking them six weeks to drive to their forest home in Boston township, Ionia county, the farm on which the South Boston Grange hall now stands. In 1853 he married Amanda Hunt, and they began carving out a home one mile east of the Grange Hall, where they still reside.

Being an admirer of good stock from early boyhood, he became convinced that breeding thoroughbred stock was the only way to banish "scrubs" and bring this interesting branch of farm industry up to his ideal of what first-class stock ought to be. He made his first purchase of registered Shorthorns in 1873, and in 1878 purchased thoroughbred Herefords. After a close study of the characteristics of these breeds, he became convinced that there must be a more general purpose breed of cattle than either, and as he had also decided that horns were a nuisance, in 1880 he purchased the first registered Red Polled bull owned in Michigan, from the herd of G. F. Tabor, of New York, Mr. Tabor being the first importer of this breed of cattle in America.

The first meeting of the Michigan breeders of Red Polled cattle was held at Mr. English's residence in June, 1890, when the Michigan Red Polled Cattle Association was organized, the meetings to be held at Lansing in December of each year. Mr. English was elected president of the association and has been re-elected each year since. Mr. English thinks that he now has a fine herd of general purpose cattle.

Personally Mr. English is a very genial man and has plenty of warm friends. While well along in years he is active in body and mind, and always a regular attendant at the annual stock meetings. The interests of the Red Polls will be well cared for so long as they are in his hands.

Imitation.

A certain concern is manufacturing and selling a dehorning clipper which infringes the rights of Mr. A. C. Brosius, of Cochranville, Pa., in the manufacture and sale of his Keystone Dehorner which has been advertised in these columns each season. The infringers have been refused letters patent by the patent offices at Washington, and Mr. Brosius has brought an action against them which will shortly come up in the U. S. District Court. We very much regret that the rights of our client are thus being denied him, as the Keystone is a splendid implement for the object of its design and is very popular with the public.

DAIRY CATTLE VS. SHORT- HORNS.

To the Editor of The Michigan Farmer.

In your issue of Feb. 19 I saw a letter from friend Fishbeck, of Livingston county, in which he claims that Shorthorns are the only cattle for Michigan, and very nearly claims them to be the only dairy cow. What friend Fishbeck lacks of making the claim is completed by Mr. H. Hinds, of Montcalm county.

We know that there are a few very fine specimens of dairy cows among the Shorthorns that will give a large flow of milk, but that is not the kind of cattle the Shorthorn breeders have been breeding for the last fifteen or twenty years. We venture to say that if Mr. Hinds or Mr. Fishbeck had looked the cows over at the State Fair, or any other fair, they would not have found one cow out of twenty a good dairy cow among the Shorthorns. Mr. Hinds finds fault because the people have quit breeding the big dairy Shorthorns of twenty years ago. The reason is not because agricultural papers have been booming dairy breeds or dairying, but because a good many breeders have lost sight of the dairy in their endeavor to make more beef. In the last ten or twelve years we have seen several herds of Shorthorns that were not being milked at all, being allowed to raise a calf five or six months, and go dry the rest of the year. With this treatment year after year no wonder we hear the remark quite often of grade cows: She is a good cow, but goes dry too long. If the Shorthorn men have lost their dairy animals so that people that want to make a little butter have to look somewhere else for a cow, they should not find fault.

But that Shorthorns are grand, good beef cattle is no mistake; and the man who wants to raise beef should stick to them; but don't try to make dairy cows of them. If you are running a dairy get dairy cows.

The general purpose cow is like the combination tools on the farm, don't do anything just right. When you want her to raise you a beef calf she is sure to drop you one of the dairy type. Don't discard your dairy cows. Everyone is rushing to beef cattle. Don't rush unless you have got scrubs. Any good stock well handled will pay, and when men are trying to get out of one breed and into another is a good time to get good stock right. No need to say that beef cattle have been on top for the last year, but we will stick to our dairy cows of which we have a nice herd.

Ingham Co., Mich.

E. H.

There is lots of sound sense in what E. H. writes. The dairy qualities of Shorthorns were lost sight of in the desire to get the best beef animals. When the West got stocked up, and beef dropped below cost of production the beef Shorthorn was in the same position as the Hereford, the Polled Angus and the Galloway, and herds were sold off or allowed to run out until many of the great breeding states, such as Kentucky, Missouri, Illinois and Michigan, had very few left. The combination of qualities which had given the Shorthorn first place among the improved cattle of the world thirty years ago, had been sacrificed at the demand of the West for beef bulls and of fair judges for extremely fleshy animals. That there are yet grand specimens of this old breed shows how strong the dairy characteristics must have been bred into it by the early improvers—the Collings brothers, Stephenson, Knightley and Bates. Messrs. Hinds and Fishbeck both pay much attention to the dairy qualities of their animals, hence their enthusiasm over the showing this breed has made. But we have known Shorthorn breeders to discard their best dairy cows because they persisted in milking too long after coming in, and becoming too thin in flesh.

Our correspondent is right in his decision to stick to his dairy herd. If they suit him and the particular line of agriculture he is following he is sure to do well with them. Frequent changes from beef cattle to dairy animals, and back again, mixing the herds together and destroying the good qualities of each, is responsible for millions of dollars of loss to the farmers of the United States. There is a demand for the best butter cow, as well as the best beef cow. Then there is a demand for the cow that is a good average animal in either capacity—whose steer calves will be good feeders, her heifer calves good milkers. That style of cow can only be found in the highest perfection

among the Shorthorns of Bates blood. The only other breed which approaches them in this respect is the Red Polls, and their admirers place them very high in the scale as combination animals.

WHEN WRITING TO ADVERTISERS Please mention that you saw their advertisement in the MICHIGAN FARMER.

FOR SALE. Two Shorthorn Bulls, 11 months old, color red, in good condition. H. C. RICHARDSON, Sandstone, Jackson Co., Mich.

BARRED P. ROCKS. Buff Leghorns, Black Minors. Eggs \$1 per 17. Mammoth Pekin Ducks, 15 eggs \$1. E. L. LARNED Worden, Mich.

POLAND-CHINAS.—Orders booked now for pigs. M. B. Turkey eggs, \$2.00 for 11, and B. P. Rock \$1.50 for 13. O. B. ROBBINS, Edwardsburg, Mich.

BERKSHIRES.

48 Head of Pure Bred Berkshires will be offered at AUCTION, on the premises of the proprietor, a mile south and a mile and a half east of Washington, Macomb County, on

Thursday, March 31st,

commencing at 1 p. m. Herd headed by Auden 384, and consists of 11 boars from three years to five months old; 22 sows, 14 bred to farrow in March, April, May and June; also 15 shoats. All sums of \$5 and under, cash; all above, six months' credit on approved notes at 6 per cent. A. ADAMS, Proprietor, Washington, Mich.

PUBLIC SALE of 26 Head Shorthorns

At the Allen Stock Farm, Allen, Mich. On Wednesday, April 13th, 1898, 9 good, young bulls ready for service, some herd headers, and 17 females representing both beef and milking strains. Will also sell about 20 head American Merino ewes of Mich. register. Sale at 2 p. m. No postponement on account of weather. Write for catalog. T. M. SOUTHWORTH & SON, Allen, Hillsdale Co., Mich.

25—Shorthorns—25

One to six years old.

20 Females, 5 Young Bulls.

They are the kind that will do you good.

SPECIAL PRICES FOR THE NEXT 30 DAYS.

WE MEAN BUSINESS.

Parties met at depot by appointment.

W. E. BOYDEN, Delhi Mills, Mich.

WANTED TO EXCHANGE A Standard-bred Stallion, one of the handsomest sons of Masterlode Has two colts to his credit with records better than 2:25. Sound and right in every respect. Will exchange for a matched pair of drivers, or a Percheron that will weigh from 1,600 to 1,800 lbs. or a large French Coach Stallion. Also a house and lot in Bear Lake to exchange for land. Address W. E. GILKEY, Plainfield, Mich.

EVERGREEN STOCK FARM, Bangor, Mich. We will make special prices with great reduction to any man that will visit our farm within the next ten days, as it is now time you should have your stallion on exhibition. We have the finest collection in the State of Black Percherons and French Coach Stallions. Each of these horses will pay for himself this season, and you need one in your neighborhood to improve your stock. Come at once while this offer remains. THOMAS CROSS.

THIS SHOE for working horses on swamp land is patented and manufactured by L. BRIGHAM, Decatur, Mich. Send for Circular.

WHOLE AMBEN preserves the harness. BIG PROFITS TO AGENTS. Also Europe's Best Sheep Dip. Write to ALFRED E. ANDERSEN & CO., Minneapolis, Minn.

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Portland, Ore.

The Horse.

CONDUCTED BY ROBERT GIBBONS.

Address all correspondence to MICHIGAN FARMER
Detroit, Mich.

NEW RULES OF THE NATIONAL TROTTING ASSOCIATION.

Since the adoption of the three new rules by the National Trotting Association some six weeks ago, they have been subjected to general criticism by the journals representing the trotting interest, and their correspondents. Several journals, notably the Chicago Horseman, have started a crusade against the rules, and bitterly assailed them. The latter journal instituted a canvass by mail of what it calls "the harness racing constituency of this republic and Canada," by submitting questions to them for answer which would show how each one regarded these new rules. The questions submitted by the Horseman were as follows:

- (1) Are you in favor of new rule 28, which provides that "No rider or driver shall be allowed to compete on the grounds of a member until he shall have obtained a license from the secretary of the National trotting association, etc."?
- (2) Are you in favor of new section 2, rule 9, which provides that "Horses wearing hoppers shall not be eligible to start in races on grounds of members after January 1, 1898"?
- (3) Are you in favor of new section 6, rule 27, which takes away from judges the power of declaring a deciding heat void, so that now the race must stand after one horse has won three heats, no matter how plain it is that the best horse did not win the deciding heat?

Replies to these questions were received from 36 states and several of the Canadian provinces, and the result must have been very surprising to the editor of the Horseman, although he professes to feel that the canvass has sustained his position. To the first question regarding the licensing of drivers, the vote stood 204 against and 195 in its favor, a majority of 9 against. To the second question regarding the barring of hoppers in speed contests, the vote stood 270 in its favor and 134 against—a majority of 136. The answers to the third question showed 207 against the rule, and 182 in its favor—a majority of 25. From which it appears that the opinion of horsemen is very evenly balanced regarding the expediency of compelling drivers to take out licenses, is overwhelmingly in favor of barring the use of hoppers, and that a small majority opposes the rule which states that judges shall not have the power to declare a deciding heat void. When it is remembered that this vote was taken after the Horseman, and various of its correspondents, had assailed the new rules in the most virulent terms, and predicted that they would seriously injure the National Association, the result is practically a defeat for that journal on one proposition, a victory on another, and an overwhelming defeat on the other. Yet in the face of this the Horseman asks if it would not be well to call the National Association together again to review the work of its former meeting!

Of the three new rules we regard the one barring hoppers as the most important one to those breeding and training light harness horses, and we feel gratified that the majority of breeders take a sensible view of this dangerous and ridiculous device, which is becoming altogether too common on the tracks of the country.

In this connection we quote the opinion of John Splan, a driver and trainer of great ability and long experience, regarding the use of hoppers: "They are unsightly to the public. To have a horse trained and raced in them depreciates his value 50 per cent. In my judgment 90 per cent of the horses trained in hoppers could be trained to go much better without them. It would probably take a little more time and perhaps more talent in the trainer, but the result would be so much more satisfactory, financially and otherwise, that the owners could afford to abide their time and pay the talent."

The Turf, Field and Farm, which is generally fair in its treatment of such questions, says of hoppers:

"Men who trot and pace horses on trotting tracks will be given a year to get rid of hoppers. The bar does not operate until January 1, 1899. The object of racing is to improve the breed of horses, and we certainly do not improve the breed by tying legs together. No one would think for a moment of purchasing a hopped horse for road driving. In the future the heavier demand for light harness horses will come from road riders, and breeders who are not prepared to meet the demand will be forced to the wall."

A BOOM IS SURELY COMING.

Editor Michigan Farmer.

The Chicago Drivers' Journal of March 9 reports Mr. F. J. Berry, Chicago's greatest horse dealer, as saying: "I think there will be a great revival in breeding a much better and higher class of horses, and the depression in the price of horses will be a benefit in the end; it will result in a much larger, finer and handsomer animal, that will be more beneficial, and a much higher class of horses and better adapted to the American, as well as the foreign markets, which demand is increasing every day. Every week brings a stronger export demand and higher prices, and I believe that the horse has a great future, and the time is not far distant before they will be higher than ever before, as they have already begun to get scarce, and are increasing in price every month. The time is near at hand when the demand will far exceed the supply."

"I believe that there is no kind of stock that has so great a future, and promises so large returns for the same expense, as that most noble animal—the horse."

In this connection permit me to add that the Agricultural Department at Washington in 1893 reported the number of horses in this country as 16,206,802. A recent bulletin issued by the same department discloses the fact that there are now but 13,960,911, a decrease of 2,245,891. Notwithstanding this large decrease in numbers, the same authority states that farm horses alone during 1897 have increased in value \$25,713,011. These authentic figures, coupled with the fact that for the past five years there has been no breeding to speak of, and therefore few or no colts to take the place of aged and worn-out horses, and with the other fact that there is an increasing foreign demand for American horses, will within a year advance the price of good horses up to, if not beyond, that of any period in the history of this country.

As the biggest boom in horses this country has ever known is now in sight, I appeal to breeders not to again enter the scrub business. Breed only your best mares and those to the best sires you can find.

HENRY C. WALDRON.

Washtenaw Co.

OAT SHEAVES FOR HORSES.

We have on hand at present about forty loads of oat sheaves, says a writer in a contemporary, also the same number of loads of wild hay, and a large quantity of oat straw. We sowed the oats for feed on the 15th of June, and cut them just when they began to show a yellow color. The grain is very light on the sheaves, but the straw is nice and green, and we are satisfied that it is the best feed for horses that we have used since we came here, which is twenty-four years ago last June. We give to the idle horses, one sheaf each three times a day, no other feed is given; we make no change in the amount, with exception of foals and year-olds, which get a little less than one whole sheaf. We water all horses first thing in the morning, before they are fed, and also just before night, at trough in yard, and pump the water as they drink (particularly in winter), as we think it better to let them have water at the temperature it is in the well, instead of pumping a trough full and letting it stand, as the temperature of the water soon falls to the freezing point. We consider the watering of horses a very important matter, and feel satisfied that they should get most of their water before being fed; if idle, they should have water twice a day; and if working, not less than three times. We tie all our horses in single stalls, as we think a horse does best when in his own berth and not annoyed by another horse. The stalls are five feet wide, three-inch plank for floor, and stalls and mangers of two-inch, and so arranged as to feed all at the head. We turn all idle horses out in the yard part of the forenoon when the stable is being cleaned; all mangers and stalls are thoroughly cleaned each day. No bad smell will exist if the stable is properly cleaned each day. Our stable is so arranged that we can have any temperature desired, but keep it about fifty degrees. We do not use over three teams for work in winter, and as we are twenty miles from wood, we feed those more liberally by giving them one gallon of crushed oats twice a day, with boiled barley mixed with bran for night feed. Horses that we work in winter we shoe on fore feet only. We do not

blanket any of our horses when in our stable, as they are warm enough without, but if we have occasion to stay over night and have to put them in a colder stable than they have been used to at home, we put on blankets. We do not think it right to clip horses, but it may not do much harm if they are kept in a warm stable with a light blanket on, and away from drafts, until the hair grows again to a fair length. Our brood mares run idle from the time plowing is done in the fall until after they foal in spring.

HORSE GOSSIP.

There were shipped from Chicago yesterday to E. C. Roberts, a well-known London horse dealer and one of the principal export buyers of this market, 40 head of big, heavy draft horses, ranging in weight from 1,600 to 1,900 pounds, 5 and 6 years old, grays, bays and browns, and every one a model. They were of English Shire blood, and cost about \$205 per head, the entire lot bringing \$8,200. They were all purchased on one Illinois farm.

The National Horse Breeders and Dealers, in view of the present situation in horse breeding, and the limited supply of good horses for the world's markets now open to America, have called a national convention to meet in Chicago on the 30th of March, the object of which is to encourage the breeding of the best classes of horses to suit the increasing domestic and foreign demand, to discuss together the market requirements as to the best class of horses to breed for the city and export trade, with due consideration for the wants and interests of the farm; also to organize a national horse breeders and dealers' association to permanently advance these interests, to encourage the improvement of American horse breeding up to the standard of the world's best markets. Able speakers are to be in attendance.

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350 Percherons AND French Coachers.

Stallions and Mares of highest type on hand at present time.

90 Stallions Old Enough for Service.

Good colors, large size and best of breeding. 18 of them imported in 1896. No man wishing to buy can afford to miss seeing this collection. Oaklawn Farm meets all trains. Separate catalogue for each breed. Say whether Percheron or French Coach is wanted. Address

M. W. DUNHAM, WAYNE, Dupage Co., Ill.

40 Holstein heifers and bulls for sale; heaviest combined milk and butter families of the breed. Prices reasonable.



Lafayette Stock Farm.

We are the largest importers of the Oldenburg German Coach Stallions in America. Our new importation arrived in '97. Large line of Black Normans from 1,800 to 2,000 lbs. Big trotting Stallions and French Coach Stallions. Terms easy to good parties. J. CROUCH & SON, Prop., Lafayette, Ind.

Clydesdale Mares.

Five Pure Bred Mares from 8 to 2 Years Old, bred from stallions and mares imported by O. W. Parsell, of Flushing. These are choice animals, and only sold to close out the business. They can be bought at very reasonable prices. Address R. E. PARSELL, Flushing, Mich.

ELMWOOD STOCK FARM, The home of American bred PERCHERONS.

Registered stallions and mares. Grade mares and geldings weighing from 1,500 to 1,800. Matched teams. HENRY C. WALDRON, Worden, Washtenaw Co., Mich.

EVERGREEN STOCK FARM.—Black Percherons, French Draft and French Coach Stallions for sale. Special attention is called to our imported French Coach Stallions. Send for catalogue and descriptions. We also have carriage horses and draft horses for sale. Come early and make selections. THOMAS CROSS, Bangor, Mich.

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We have imported more stallions from France since 1893 than all others combined. Write or call on us if you want the best of either

French Coachers or Percherons.

HOGS.

CHESTER White Swine and Lincoln Sheep. Either sex and all ages for sale. Sows bred for spring farrow. Write A. H. WARREN, Ovid, Mich.

FOR SALE.—Large Poland-China sows, bred to Model Wilkes, Vol. 20, for Mich. and April farrow. Prices reasonable. F. M. PIGGOTT, Fowler, Mich.

MERCHANT KELLY, Woodstock, Mich., breeder of LARGE ENGLISH BERKSHIRES. Pairs not akin for sale cheap.

R. M. CROSS, Ovid, Mich., breeder of Victoria swine. Stock for sale. Breeding stock recorded. Reasonable prices. Correspondence solicited.

THE PLUM HILL HERD of large English Berkshire swine, B. P. Rock and S. P. Hamburg fowls. Stock and eggs for sale. C. M. BRAY, St. Johns, Mich.

POLAND-CHINAS.—10 sows bred for March and April farrow. Sept. boars must give place to the pig crop of '98. Shipping point Lansing or Grand Lodge. L. F. CONRAD, Wacousta, Mich.

LARGE ENGLISH BERKSHIRE SWINE of the best strains for sale. Write for breeding and prices. C. E. FAULTHORP & CO., Mt. Morris, Mich.

LARGE ENGLISH BERKSHIRE SWINE, highly bred, from leading families. Write for prices. V. E. HACKNEY, Mt. Morris, Mich.

POLAND-CHINAS.—5 sows, Black U. S. strain, bred for April farrow. Bargains for buyers. Also fall pigs. E. D. BISHOP, Woodbury, Mich.

DUROC JERSEY SWINE. Spring and fall sexes. H. D. HALL, Martin, Mich.

POLAND-CHINAS.—Two spring and 8 fall boars for sale; 4 choice sows to farrow in April. Prices right. Address WM. L. FENNOCK, Hastings, Mich.

POLAND-CHINAS.—A few choice young boars. A grand lot of sows bred to the champion young boars "Chief Hidestretcher" and "Wilkes Tecumseh," (Vol. 20, O. rec.) L. W. BARNES, Byron, Mich.

J. H. BANGHART, Lansing, Mich.—Duroc and W. Pekin Ducks. Eggs for hatching. Catalogue free. Jerusalem Artichokes \$1; two bushels, \$1.50.

N. A. CLAPP WIXOM, MICH., BREEDER OF Large English Berkshire Swine. Write for prices.

GRAND RIVER HERD OF O. I. C. JOHN BERNER, Prop., Grand Lodge, Mich. My stock comes direct from L. B. Silver Co. Write for prices.

P. C. BROOD SOWS. High Quality, Very Cheap. FOR 30 DAYS ONLY. Write to-day for price list. A. H. FOSTER, Allegan, Mich.

FOR SALE from my great prize-winning herd of registered O. I. C. swine. Twelve extra fine boar pigs old enough for service. First man sending draft for \$12 gets the choice. G. S. BENJAMIN, Portland, Mich.

Hastings Stock and Poultry Farm, breeder and shipper of Poland-China swine, B. P. R. chicks. Write for bargains. WILLARD PERRY, Hastings, Mich.

Special Sale of Chester Whites at CASS VALLEY FARM. Lot of fall and spring pigs, dandies, at 1/4 their value. Write to-day and secure a bargain. W. W. BALCH, Deford, Mich.

SPRING litters are coming and we must have room. Bargains in P. C. SOWS bred for April and May farrow to ideal Chief. Also fall boars and B. P. Rock cockerels. A. A. WOOD, Saline, Mich.

First Premium Herd of Poland-Chinas. Sows bred to King Kiever for sale. Also some fall pigs bred over one-third of the premiums offered at Mich. State Fair in '97, winning all the firsts on pigs, 8 herds competing. E. J. & L. HARRINGTON, Paw Paw, Mich.

CHESTER WHITES. Have a few choice young sows bred for sale; 18 sows bred for next season's trade, whose combined weight is 6,400 lbs. Booking orders for June delivery. 25 choice Lt. Brahma Cock® reared from 1 to \$2 each; eggs \$1 for 15. W. O. WILSON, Okemos, Mich.

Sheep and Wool.

CONDUCTED BY ROBERT GIBBONS.

Address all correspondence to MICHIGAN FARMER, Detroit, Mich.

PASTURE FOR SHEEP.

A correspondent at Elva, Tuscola County, sends the following queries:

"I have 12 acres of clay loam that had corn on last year. I wish to pulverize it up this spring and sow on something that will make pasture for sheep during the summer. Then I wish to sow to rye in the fall and seed to clover in the spring. What would you advise to sow for such a pasture?"

We don't know of anything better for such a purpose than rape. It will give more feed per acre than anything we know of. We would suggest you fit the ground, divide it into three portions, and have one portion of it ready to sow to rape—Dwarf Essex variety—about the first of May. About five or six weeks later sow the second portion, which will bring it to about the middle of June. Then you can sow the third portion the middle or latter part of July. This will give three crops of the rape, each coming about the time the other has been fed off. Have a portable fence or hurdle to fence the sheep in to the part of the field being pastured. In putting in the rape we think it best to do so with a drill, so the ground can be kept worked while the plants are small, so as to stop the growth of weeds, and retain the moisture in the soil. In this way your land will be easily prepared for seeding in the fall.

As we do not know how many sheep you have, or the particular breed, we are compelled to answer your questions in a general way. The twelve acres should carry from 65 to 90 sheep, depending upon their size, from the time it is first ready to turn into until the end of September. While the second plot is being fed off the plants will be getting a start again on the first one, and so on.

The drill rows should be about 28 inches apart, and the seed required will be 2½ to 3 pounds per acre. If sown broadcast it will require 4 pounds per acre. In turning your flock into the rape, use the same precautions as if you were turning them into a clover pasture, as they are nearly certain to suffer from bloat otherwise. Be sure and supply them with salt. If your flock is not sufficiently large to utilize the crop, it need not go to waste if you have any hogs or cattle. They will do as well on the rape as the sheep.

In preparing the soil for rape it should be fitted as well as possible, and fertilized with barnyard manure. The rape plant is closely allied to the cabbage, and should have the same care to do well. It is very susceptible to frosts, as the plants are full of moisture, hence it will not do to plant before May 1st, after the soil has got warmed up.

WHAT SHEEP TO RAISE.

From an address by a Canadian sheep-breeder recently made at Brantford, Ont., and from extracts which are being published in a number of the agricultural journals, we take the following:

If we make an inspection of the sheep brought in for sale in some of our largest stockyards, as I have done in the past few days, one cannot but ask, "What kind of beasts are these?" Eighty-eight per cent of them are not worthy of the name of sheep; they are not even fit for guano, for flesh they have not, bones they are not, wool is not. While this sort of nondescript trash is supplied to our markets sheep husbandry should not lay claim to a place. In our day of advanced agricultural and modern civilization they are not what is wanted either at home or abroad.

Even to-day men who ought to know better are trying experiments with breeds that, if followed by many, will keep us back in the business another decade. Men need no longer experiment with crossing one breed with another. Put up two questions where you can always see them, then work to them. They are these: What kind of mutton does the market demand? What kind of wool does the market want? Remember always that it means to-day, not what the demand was fifty years ago, not last year or yesterday, but to-day and the future.

The highest-priced sheep sold in our markets to-day are those that are

suited for the clubs and hotels in our largest cities. For such sheep a ready market is found at twenty-five and thirty cents per pound. When you can get \$37 to \$42 for the carcass of a lamb or wether you are entitled to distinction as a sheep grower. In the large stockyards of our country the highest price is paid for export mutton. Such sheep must be well matured at an early age, large and uniform, with good, solid flesh, not too fat and not at all lean.

Ordinary common sheep put in pens and gorged on rich feed or swill from malt houses will not meet the demand, for such sheep are too fat and the meat will never harden.

Sheep must be of good blood, capable of maturing early, of good constitution, by heredity, so that they can attain size and weight with exercise and on dry feed. The exercise makes muscle, and that is lean meat. Such sheep stand shipping and do not shrink or soften.

Our export sheep come in competition in the foreign markets with those from many other countries, and we should take a national pride in having our produce compare favorably with any others. We have greater range, better feed and more favorable conditions to grow perfect animals than almost any other country, and all it needs to give us the credit abroad of producing the best and securing the maximum price and maintaining a steady trade is for our growers to use their brains and couple their work with their intelligent reasoning.

It strikes us there are several points in the above extract which are hardly in accordance with facts. The statement that the large stockyards of the country are filled with nondescript trash, not worthy of the name of sheep, is not borne out by reports from such markets as Chicago, Buffalo and New York, nor warranted by the prices paid every day in those markets. The statement is simply a case of exaggeration, as those who fit and market sheep well know.

The talk of receiving \$37 to \$42 for a lamb or wether carcass is another case of magnificent exaggeration, and if a man is not entitled to distinction as a sheep grower until he obtains such a price he will surely die with his ambition unattained. When he can sell a good early lamb carcass for \$8, he may feel quite sure he is doing as well as any other sheep man who is paying attention to that branch of sheep husbandry.

The statement that in our large stockyards "the highest price is paid for export mutton" is not in accordance with facts. For many months well finished handy weight sheep and lambs have topped the market, every week's report from the Buffalo market stating that heavy weights were slow of sale and weak in price, while the quotations show the difference to be from 25 to 40 cents per hundred in the case of lambs, and 10 to 25 cents in the case of sheep. At the Buffalo market, March 14, when all classes of sheep and lambs were in light supply, the Mercantile Review said:

"Top lambs generally brought \$6.00, with good and choice lots at \$5.80 to \$5.90, an advance of 20¢ over Saturday's values, while buyers were not discriminating so closely against anything weighing above 85 pounds, but if they had the requisite prime quality they generally went in with the loads, if not too heavy, while culls and common lambs sold at 10¢ to 15¢ advance, selling all the way from \$4.75 to \$5.40, as to quality. Orders were in for a few heavy lambs to the exporters, but they were restricted to about the average prices that that class of lambs sold at the past week or more, making the market values only an average of \$5.25 to \$5.40."

That paper quoted fancy lambs of 85 to 90 lbs. at \$5.90 to \$6 per hundred; heavy lambs, averaging 110 to 95 lbs., \$5.25 to \$5.40; prime to fancy wethers, \$4.75 to \$4.90; heavy wethers, 110 to 150 lbs., \$4.60 to \$4.75. The feeder, therefore, who keeps his sheep or lambs until they reach heavy weights will surely have to accept lower prices for them than if he had sold earlier.

There are several points in the address, however, which deserve commendation. The feeder should ask what kind of mutton does the market demand? And that is what he should strive to grow. The same with wool. To-day and the future is what the sheep-breeder, the wool-grower and the mutton feeder must consider. Then the warning about mixing up established breeds is timely, for if it is carried much further, and the produce retained in the flocks to breed from, the sheep of the country will soon become hopelessly mongrelized. The established mutton and wool-growing breeds

are the results of long years of hard work on the part of skillful breeders, and to mix them up is simply to throw away what they have gained, and which the feeder and wool-grower can utilize to his financial advantage.

FLOCKS AND FLEECES.

It is too early to send clipped sheep or lambs to market. After April 1st will be a better time. At present clipped sheep and lambs are discriminated against.

The state commissioner of Wyoming reports that there are 3,095,192 sheep in that state, and that the wool clip amounts to 24,012,498 pounds. From other sources we learn that the season has not been a favorable one, and that heavy losses have occurred to flocks in the Northern part of the state, owing to the severity of the weather.

There is a growing tendency to discriminate against heavy sheep that is not promising for the market for wethers. Handy weights and lambs are all the go now, and an extra heavy lot of sheep is often neglected for some equally well finished but of lighter weight. This is not the proper way to encourage great weights, but there seems to be no way to counteract the fashion.—Northwestern Farmer.

At the London wool sales now in progress no American buyers are reported as among the bidders. Values, however, are well maintained, especially on fine Merino grades, which are in very light supply. It is apparent that American dealers think they have sufficient foreign stock on hand to meet their requirements for the present, and will not be large purchasers until after the home clip has been marketed and its amount and character definitely ascertained.

We regret to learn that the fine Merino ram, H. E. Moore, 153, the best of those selected by Mr. Norton for shipment to Australia, either died in the express car or was killed by accident. Mr. Norton said this ram was worth the \$200 paid for the four head he selected, and Mr. Moore said he had done wrong to sell him, as he was the best sheep he ever bred. He has six ram and four ewe lambs from him, and of course prizes them highly. This ram was sired by H. E. M., 90, dam M. W. Shattuck 3, by Peter Voorheis 120; 2'd dam, J. Windiate 50, by A. Diehl 86. The sire of H. E. M. 90 was L. Sprague 141.

A French inventor is said to have discovered a method by which the wool on sheepskins may be converted into velvet. Up to this time sheepskins with the wool on them have only been used for rugs, carpets or the lining of clothing, and the wool has been left in the curled or combed state. Seeing that the natural disposition of the innumerable fibres is perfectly regular, and suited to ventilation, the inventor conceived the idea of removing all the impurities from the skin and adjusting them in such a way that the hairs would not tangle or mat.

The Lincoln sheep is said to have the longest fleece of the three English long-wool breeds, Lincoln, Leicester and Cotswold. The fleece of the Leicester is of a little shorter staple and has a greyish tinge, while the Lincoln fleece, when clean, is silvery white. The Cotswold alone of the three has a heavy foretop. It has a white fleece like the Lincoln, though it is shorter and inclined to be wavy, the Lincoln fleece hanging in flakes or locks. The three are in fineness as follows: Lincoln first, Leicester second, and Cotswold third. All are luster wools, as coming a smooth, glossy surface, as compared with the felting wools of the several Merino families. In the trade they are known as the "braid" wools.

A correspondent of the Prairie Farmer, writing from Nebraska, says: "The vast quantity of sheep fed in Nebraska is attracting attention throughout live stock centers. The number exceeds the number fed in the state any previous year by several million. A close estimate places the number now being fed in Nebraska, at five million. This is probably below the actual figures. These vast bands were driven from points as far removed as New Mexico, but the great bulk came from Wyoming and Colorado to the Western counties of the state." If these figures are not exaggerated it is quite certain that there will not be any shortage in mutton sheep this spring. Ohio is feeding more sheep than ever before, and so is Michigan. As a rule, too, they are better sheep, and have been fed better.

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DOGS FOR SALE.—Sporting and Pet Dogs Pigeons, Rabbits and Hares. 10c. for catalogue C. L. B. LANDIS, Bower's Station, Berks Co., Pa.

Grange Department.

Our Motto:—"The farmer is of more consequence than the farm, and should be first improved."

Address all correspondence for this department to

KENTON L. BUTTERFIELD,
AGRICULTURAL COLLEGE, - - MICH.

News from Michigan Granges is especially solicited.

BOTH SIDES OF THE TAX QUESTION.

We are very glad indeed to present to our readers this week articles on either side of the all important question which is to be under discussion for a few weeks, not only in Lansing, but in every part of our State. We are especially pleased that we have secured articles from two men of such standing—each being recognized as an authoritative exponent of the opposing views on the taxation of railroads. In getting both sides, we have simply followed our custom. Let us all study this matter carefully, recognizing that there are two sides, but determined that right and justice shall be done.

THE PROPOSED PLAN.

BY HON. JOHN ATKINSON.

You ask me for a statement of the bill introduced into the two houses for the assessment of taxes on railroad, express, telegraph and telephone companies, and the theory upon which it is based.

The bill is simple in its construction. It creates a board of assessors; the Auditor-General is to be president; four other freeholders are to be appointed by the Governor. Three constitute a quorum for business.

They elect a secretary who is to keep a faithful record of their proceedings and who is to receive a salary not to exceed two thousand dollars. The members receive ten dollars a day for time actually spent. They hold their sessions at the Auditor-General's office, and all their books and papers are there preserved. The board is to meet on the 1st of September, and is expected to complete its work by the 1st of November, and file its assessment roll by the 10th of December.

It taxes the companies named at the average rate paid by ordinary taxpayers for State, county, and municipal purposes.

In fixing values, it is required to assess the franchises as well as the other property of the companies, and where they are inter-state concerns to assess the proportion that properly belongs to Michigan.

The board has power to require reports from the several companies and to use all reports made to other officers, to examine witnesses, and to inspect the property of the several companies so as to make a fair and just valuation.

The bill provides for a hearing if any of the concerns to be taxed apply for it.

The principle of the bill is easily understood. Its object is to make these companies pay their exact share of the public burdens, no more, no less.

The necessity of the bill is equally plain. The property which finds its way to the assessment rolls made by the supervisors of the townships and the assessing officers in cities, during the year 1897, was taxed at the average rate of three per cent. This upon a careful examination by the Board of Review was found to be the average rate throughout the State. The property was probably assessed at less than its ordinary selling price, but these figures are based upon its assessed value.

Railroad property, during the same year, paid a tax on earnings which only amounted to about one-quarter of one per cent on the values as sworn to by the railroad officials.

To illustrate: A man owning a piece of ordinary property valued at \$5,000 is required to pay for State, county, and municipal taxes, \$150.

A man owning railroad property worth \$5,000 is required to pay \$12.50. The whole property of the State, assessed for about one billion dollars, paid for State, county, and municipal purposes, thirty millions of dollars.

The railroad property, valued by the companies at about three hundred millions of dollars, paid less than \$750,000.

These figures present the railroad problem.

Express companies, under our present law, pay in round numbers \$2,500 in taxes. In Indiana they pay in round numbers about \$35,000.

The railroads upon which express companies do business are nearly 1,400 miles greater in Michigan than they are in Indiana, and the commerce of Michigan exceeds that of Indiana by about fifty millions of dollars. In Indiana they are assessed upon the value of their capital used in the state. In Michigan they are assessed on earnings.

This is the problem as to express companies.

Telegraph and telephone companies, under our law, are required to pay the average rate of taxes paid by others upon the valuation of their property. But there is no proper system of ascertaining what that value is. In the neighboring states of Indiana and Ohio, where their properties are properly assessed, they pay about three times the taxes which they pay in Michigan.

This is the problem as to telegraph and telephone companies.

These figures are undisputed. It is not claimed by any of those who are interested in these companies that they are paying their proportion of the taxes.

The claim is made that these companies should not be made to pay their proportionate share on the ground that railroad companies make lower charges for carrying freight and passengers than in other states.

As to the other companies named there is no such pretense made, and no reason is alleged why they should pay less than their share. Express charges and telegraph and telephone charges are as high as or higher than in other states.

The claim made for the railroads is based upon a false statement. The average charges for carrying freight in Michigan were, during the last year, a little more than eight mills on each ton of freight per mile. The average rate for the same service in Indiana was about six mills.

In other words, the people of Michigan paid in round numbers one-third more for the carriage of their freight than did the people of Indiana.

During the same year the railroads in Indiana paid more than three times as much in taxes, although they had nearly 1,400 miles less of track, than the railroads in Michigan, and more than four times as much per mile.

Comparisons with other states are even more striking. Michigan gets less than \$98 per mile in taxes. Iowa gets \$159.09. New York gets \$978.87. Illinois gets \$395.83. Massachusetts gets \$1,668.48.

Our present system differs from the systems of all other states. Twenty-five states levy taxes on the cash value of railroads. Three other states levy a tax on gross earnings, but a higher tax than ours. Seven states treat railroads exactly like other property and subject them to local taxation. The remaining states have mixed systems, but in no state of the Union are railroads permitted to escape taxation as they do in Michigan.

No other state in the Union has made larger donations to railroads than Michigan. More than two-thirds of the cost of building the railroads has been paid by the State in gifts of public lands or by the people of the townships through which railroads have been built, in bonuses. We have given the railroads more than five millions of acres. We have exempted the lands given from taxation for periods ranging from seven to sixteen years.

Is there any reason why these companies, so richly endowed by the State, should not pay their share of the taxes?

This is the question which the legislature is called upon to answer. The bill aims at equal rights for all. It contains no element of confiscation and no element of oppression. It is not proposed by it to correct the evils of the past. It aims simply to protect the ordinary taxpayer in the future.

The bill is not based upon any new principle.

In the special charters of 1846 we provided for a tax of three-quarters of one per cent upon the capital stock and all moneys used in construction of the roads. This was at that time something more than the average rate paid by other taxpayers.

In 1855 the first Republican legislature, in passing the general railroad law, required the roads organized under it to pay one per cent upon their capital stock. This was at the time a

little more than the average rate paid by other taxpayers.

In 1869 the railroads were required to pay, in addition to the one per cent upon their capital stock, the same rate upon all bonuses given them by the townships and moneys borrowed and used in construction.

It was not until 1871 that the present system was adopted.

The repeal of the general railroad law of 1855 and the substitution for it of the present system has resulted in reducing the rate paid by the railroads from one per cent on their cost to less than one-quarter of one per cent.

In the meantime the rate of taxation upon ordinary taxpayers has increased from six cents per capita to \$1.34 per capita. They have had to build asylums, prisons, and schools, which have cost them enormous sums of money. They will be called upon in the near future to increase these expenditures. Our asylums are crowded; in our prisons men are sleeping in the hallways for want of accommodations; in many of the school districts of the State schools are only maintained for a few months, and in all of them the school taxes have become burdensome.

All that the friends of the bill now pending ask is that in the future development of the State all property shall be treated alike, and that there shall be no favorites and no victims.

House of Representatives, Lansing.

THE RAILROAD VIEW.

BY MR. E. W. MEDDAUGH, SOLICITOR FOR THE GRAND TRUNK RAILWAY.

I concede that railroad companies should bear their just proportion of taxation. The question is, what is this just proportion. The Governor's notion on the subject seems to be that they should pay the same rate of tax on their value that is paid by other property. Is this notion correct? It is, if railroads stand in the same relation to the State and the public as the property of the merchant, the manufacturer, the farmer, etc. Do they stand in the same relation? Is not their relation to the public so different as to render unjust the application to them of the rule of equality in taxation?

First, Railroads are dedicated to the public service, and their owners are under obligation to render this service for a reasonable reward, with power in the Legislature to determine what is reasonable, and to prescribe it. Is the use of other property in the State, such as that of the merchant, the manufacturer, or the farmer, so affected? Clearly it is not.

We have here, then, one very essential particular in which railroads differ from other property.

Second. The public occupies two quite separate and distinct relations to railroads, in both of which the public derives a direct benefit. From one it secures a reasonable rate of transportation for persons and property, and it is always in position to enforce this. From the other it secures money to the public treasury through taxation.

The public gets only one of these benefits from other property—namely, taxes.

Suppose that the State owned and operated all the railroads within its boundaries. Taxes from that source would cease altogether, as the State does not tax its own property. The only public benefit that would be realized from them would be in whatever reduction the State might find itself able to make in rates of transportation.

The public now receives a direct benefit from railroads in low rates, and these low rates deplete the revenue of the companies operating them. Unless these low rates are taken into consideration in connection with railroad taxation, and due allowance made for them, it is evident that the property may be subjected to double taxation; for when the earnings are reduced by low rates such reduction is in itself in the nature of a tax. The public gets the benefit.

Under the existing system, the railroads are tapped at both ends. The public takes toll out of the grist when it enters the mill and again when the grist comes out.

Third. Another difference between railroads and other property is that a railroad, once built and in operation, is dedicated to the public use, and must be operated so long as it is self-supporting; that is to say, so long as its earnings will pay operating expenses and maintenance charges, notwithstanding that those whose money built and equipped the road may never re-

ceive one cent of return on the investment.

This is not true of any other property within the limits of the State of Michigan. There are railroads in this State to-day whose earnings, in excess of operating expenses, under the most economical management, are not equal to one-half the interest on a low mileage of bond debt.

Railroads are in the nature of public property; they partake more of a public than of a private character. About the only interest their owners have in them is the right to dividends, if there are any earned.

Is there any parallel in the foregoing particulars between railroads and other property? Are not the owners of property, of which the public thus has a beneficial use at the expense of the owners, fairly entitled to some consideration at the hands of the public in the matter of taxation, beyond what the owners of other property, of which the public has no such beneficial use, are entitled to?

Fourth. The State not only determines what the companies operating railroads may charge for their service, but it also prescribes the manner of conducting their business in many particulars, thereby adding greatly to the expense of it. All this is done by the State, on the theory that it is for the public good, and much of it undoubtedly is.

The management of other property and business is not so interfered with.

It has been urged, in reply to the foregoing, that omnibus companies, and certain others whose business is of exceptional character in respect of the public, are equally subject to State regulation and control, and therefore, according to the argument, have equal claim with the railroads to consideration in reference to taxation. The first answer to this is that, if it be conceded that the branches of business named are subject to State regulation and control, the practical fact is that the State does not exercise the power of limiting their charges. But if they were all actually under a statutory limitation of charges, this fact would not be any answer to the contention I am here making, unless it also appeared that these several businesses were unremunerative to their owners. Furthermore, to compare any one of such industries, or all of them together, with the great railroad systems of this State, in reference to the public benefits afforded, is to trifle with the subject. They are, in fact, all made profitable, directly and indirectly, by the railroads, as are all other industries in the State.

It has been stated that the low railroad rates which prevail in Michigan are the result of competition, and not of legislative interference. This is in part true, no doubt, but not altogether so. To what extent it is untrue the space allotted for this article will not permit me to point out. But what difference does it make whether low rates are produced by the State or by any other coercive force, in reference to the question under consideration? The public at large gets the benefit of them, and this general public benefit, which is not produced either in kind or degree by other property or business, and in which all other property and business of the State share, constitutes the claimed basis for the lower rate of taxation for railroads than for other property. The remunerative business that a vast majority of the great industries of the State are to-day doing, while the railroads on which their prosperity depends are operated at a loss to their owners, is rendered possible only by the existence of the railroads and the low rates they give.

If the foregoing positions and arguments are sound, and they are believed to be, it only remains for the Legislature to inquire whether, in view of the low rates that the railroads give to the public, and the small surplus over actual cost of operation that they earn for the men whose capital built them, they are not paying all the taxes that can justly be demanded. To such an inquiry I believe there can be but one correct answer.

Detroit.

GRANGE NEWS.

CHARITY GRANGE, NO. 417, meets twice a month, and has about 40 members. At next meeting we will practice U. W., taking one degree at each meeting.

Sanilac Co. COR.

DECATUR GRANGE, NO. 346, met March 5 and gave the third and fourth degrees to six candidates. This

was followed by a feast and general good time.
Van Buren Co. A. L. SUTTON.
WILLIAMSTON GRANGE, NO. 115,
held an interesting meeting March 2. The delegates to the Michigan State Round-Up Farmers' Institute made their reports, and the important questions were ably discussed.

Ingham Co. MRS. A. J. WATSON.
MONTGOMERY GRANGE, NO. 549,
at the last meeting discussed the sugar beet industry, and also balloted for a candidate. Initiating will soon be the principal work.

Sanilac Co. ALVIN KEYS.
SYLVAN GRANGE, NO. 393.
We meet the second and fourth Saturday evenings of every month. Have tried the plan of having literary contests in the Grange. They have created considerable interest. Grange is in prosperous condition.

Oceana Co. VICTOR MUNSON.
HOME GRANGE, NO. 129,
meets every alternate Saturday evening, usually with a good attendance and a fine program. We have bought our binding twine through the Grange for several years, and it has always given universal satisfaction.

Calhoun Co. MRS. CORA SUTHERLAND.
JOHNSTOWN GRANGE, NO. 127,
adopted appropriate resolutions concerning the death of Bro. Wm. P. Bristol. He was the father of this Grange and his endeavors were exerted for its prosperity and welfare. We mourn for one who was in every way worthy of our love and respect.

Barry Co. COMMITTEE.
ALUMINIA GRANGE, NO. 585,
was well represented at Newaygo County Pomona Grange, held at Fremont, March 2 and 3, fourteen members of our Grange attending. At our last meeting, Feb. 26, we voted to extend an invitation to Pomona Grange to meet with us May 4 and 5. We have sent for traveling library.

Muskegon Co. MRS. DELL VIETS.
TECUMSEH GRANGE, NO. 166,
was reorganized Dec. 30, 1897, with 77 charter members. Meetings are held in the Waring schoolhouse, two miles east of the village, on Tuesday evenings on or before the full moon. The last meeting the lecturer in charge had Washington exercises. Two applications.

Lenawee Co. DANIEL T. HALL.
BENGAL GRANGE, NO. 225.
Members present at last meeting, 65. Three candidates were instructed in third and fourth degrees. March 5 first degree was conferred upon two candidates. Contest closed at last meeting in favor of the sisters. Question given out for discussion at next meeting is "Pure Food Law."

Clinton Co. CORA HILL.
SODUS GRANGE, NO. 122,
met Feb. 26; conferred first and second degrees on eight candidates. Will have a feast at our next meeting, March 12. We're not many in number, but we see brighter prospects ahead. We have a literary program at each meeting, and a wide-awake lecturer. Hope to have a hall in the near future.

Berrien Co. LAURA MORGAN, Cor.
PENINSULA GRANGE, NO. 663,
has had two regular meetings since last report. Our meetings have been interesting. We discussed "What Shall We Read?" All agreed that to be good citizens we must read the newspapers, else how can we know what questions are agitated and how to vote? Of course we should know about the history of different countries to know how they prospered under certain laws.

Grand Traverse Co. L. DANA, Cor.
GROVELAND GRANGE, NO. 443,
is prospering, having initiated five candidates in the past month, and received three applications for membership at our last meeting. We have one of the finest halls in the county, and hold our meetings every two weeks on Saturday night. At installation, Past Master Eugene Smith acted as installing officer. Robert Allan is master; Ida McGinnis, lecturer; N. C. Coleman, secretary.

Oakland Co. J. ANNA MCGINNIS, Cor.
BELLEVUE GRANGE, NO. 134,
has had regular and interesting meetings once in two weeks all winter. Feb. 16 entertained Eaton county Pomona; owing partly to bad roads the visiting Grange was not largely represented, but Bellevue Grange was present in force.

At our last meeting, March 8, Mr. Goodman, representing the creamery first established here, addressed the farmers in favor of the enterprise. They have purchased a creamery which was abandoned several years ago, have entirely refitted it, and we believe will be successful. Prof. Smith, of the Agricultural College is to speak

in Opera hall to the farmers Saturday, March 12, in the interest of the creamery.

S. W. GIBSON.
INLAND GRANGE, NO. 503.

At our regular meeting, March 5th, we elected two new members and discussed the circular letter sent by Bro. Jason Woodman, relative to the pure food law and uniform text books for rural schools. The discussions were entered into by the entire Grange and all expressed an opinion that both laws should be maintained.

The writer also expects to organize a new Grange at Turtle Lake in this county, on March 16th, and another is well under way. We hope to plant at least three new Granges in this county by the first of May.

Benzle Co. J. W. EDWARDS, Cor.
OTTAWA GRANGE, NO. 30.

at open meeting, February 19, had a good attendance in spite of bad weather. The question, "Is it advisable to plant more fruit trees under the present outlook?" was decided in the affirmative.

Ottawa juvenile Grange entertained the Talmadge juveniles Saturday, March 5. After dinner the Grange discussed the question, "Are our farms increasing or deteriorating in fertility?" After a long debate it was decided, that, with some exceptions, they are deteriorating.

Ottawa Co. R. J. WELLS, Cor.
FLAT ROCK GRANGE, NO. 636.

met at Bro. Perry Wagar's on the evening of Feb. 3. Four names secured for membership. Our Grange is on the road to prosperity, slowly but surely. Subject for discussion, "Postal savings banks," called out arguments in favor of petitioning Congress for same. All members are taking active interest in Grange work and will make a general movement in soliciting for membership. Will appoint a special deputy for this work very soon. Our next meeting will be held March 17, subject, "Agricultural Colleges."

Wayne Co. W. J. CAMPBELL.
BOARDMAN VALLEY GRANGE.

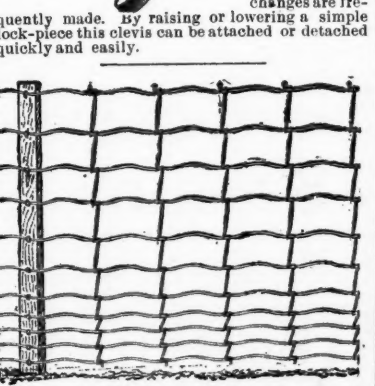
February 16 many inquiries were made in regard to peas and oats for hay. No definite answer, based on experiment, was made. It was thought to be a hard crop to cure, also that varieties of oats and peas maturing together should be sown. The outlook for the coming year in potatoes was thought discouraging; apparently every available acre in northern Michigan will be planted this year. On the 23d the young members compared the respective merits of salt and sugar; salt winning.

March 9, Bro. Carlisle made some timely remarks in regard to the duties of officers. Sister Carroll was appointed lecturer pro tem. Debate on the subject "Resolved that strong drink has caused more suffering than war" was decided in the affirmative. Bro. Rosenberg suggested that Grange news be furnished for the local press also. This proposition met with favor, but no definite action was taken.

Kalkaska Co. A. W. CARROLL.

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The combination lock-pin clevis, manufactured by the Corman Manufacturing Company, No. 225 Dearborn street, Chicago, Ill., is one of the latest inventions, and a most useful article for the farmer and teamster. It will undoubtedly take the place of all the ordinary devices used in team work where changes are frequently made. By raising or lowering a simple lock-piece this clevis can be attached or detached quickly and easily.



The Carter Wire Fence Machine Co., Box 14 Mt. Sterling, Ohio, are at present selling a machine for \$8.00, with which the farmer can weave his own fence at the exceedingly low price of 25 cents per rod, counting the cost of wire and weaving. They have also invented a machine to coil hard steel galvanized fence wire. Fences made of this wire are elastic from end to end, and it assures that the fence will not sag, stretch or pull the end pieces over. Their catalogue illustrating and explaining their New Woven Wire Fence Machine sent free.

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Safe and Effective in Every Form of This Common and Annoying Disease.

Many people suffer from piles, because after trying the many lotions, salves and ointments without relief or cure, have come to the conclusion that a surgical operation is the only thing left to try and rather than submit to the shock and risk to life of an operation, prefer to suffer on. Fortunately this is no longer necessary, the Pyramid Pile Cure, a new preparation cures every form of piles, without pain, inconvenience or detention from business.

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A person takes serious chances in neglecting a simple case of piles as the trouble soon becomes deep seated and chronic, and very frequently develops into fatal incurable rectal diseases, like fistula and rectal ulcers.

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Indiana Experiment Station Dairy School.....	Trace
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Indiana State Board of Agriculture (Department of Dairy Produce and Cattle), No Trace	
Illinois Experiment Station.....	Less than 0.1
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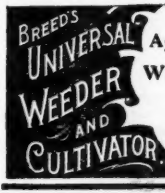
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Miscellaneous.

THE NORTH WALK MYSTERY.

BY WILL N. HARBEN.

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CHAPTER XXI.

Two days later Lampkin received a note from Hendricks. It ran as follows:

Be at your office tonight at 9 o'clock.

HENDRICKS.

When the detective came, the doctor was busy examining under a powerful microscope some consumption germs which had that afternoon been sent him by a distinguished physician.

"Busy, I see," was Hendricks' greeting as he sat down in an easy chair and dropped his slouched hat on the floor.

"How are you? Through in a minute," responded the doctor. "I want to get at the nature of this batch of germs Conway sent me this afternoon. I know little about such things, but he always wants me to sanction his conclusions."

"What sort are they?" asked Hendricks absentmindedly.

Lampkin laughed, with his eye to the microscope.

"Do you expect me to waste valuable lung power explaining things to you when your mind is a thousand miles away? Go to! What luck at Benton's?"

"Not much," answered Hendricks. "I'm stranded. Would you believe, old man, that night before last, after we got back from East Orange, I went home, went to bed, failed to sleep, got up, walked to Central park and back and then went out to Benton's?"

"I shouldn't have been surprised if you had taken your passage to Europe on a half inflated life preserver. But, really, did you go back out there?"

"That's what I did. You see, I was satisfied Montcastle's yarn was straight, and all at once it seemed to dawn on me that I had absolutely nothing to work on except the bullet which had lodged so lightly in the wall of the summer house."

"But Allen," put in Dr. Lampkin, removing one of the glass slides from his microscope and selecting another. "I thought—"

"No," Hendricks broke in; "I haven't a blasted bit of evidence against him. The fact that he had quarreled with old Benton when Benton was rowing with every soul around him wouldn't count for anything. So, you see, it was the bullet or nothing. Anyway it kept me from sleeping. I crept into the grounds at the side gate and by the light of a dark lantern carefully examined the wood in which the ball had lodged, hoping that some idea would pop into my cranium, as it often does."

"You usually have ideas to spare," remarked Lampkin, adjusting the green shade over his eyes and looking again into his microscope. "Have you heard how Allen is getting on?"

"I don't know much about him," replied Hendricks. "Kola is looking after him. He has been about Benton's all day in the disguise of a laborer. Late this afternoon he sent me a hasty message that Allen was to be moved to a private hospital up town. Kola promised to meet me here this evening."

"I am glad Allen will have medical attention," said Lampkin. "He was such a sad sight that I have not been able to stop thinking about him."

"It is the bullet that's troubling me," said Hendricks. "When I can't see natural reasons for a thing, it runs me wild. I can't account for the ball not having had more force than it had. I have talked to pistol makers, gunsmiths and old sportsmen, but none of them can explain it."

Hendricks rose, took the bullet from his pocket and unwrapped the tissue paper from about it. "You see," he continued, "the pointed end of it is scarcely flattened."

Dr. Lampkin examined the bit of lead.

"It is certainly remarkable," he said. "You say the wood was soft?"

"Almost perfectly rotten. I believe I could have made a hole in it with my bare finger. I hear your bell. It's Kola."

Lampkin went to the door. It was the adept.

"Good evening," said Kola. "Is Mr. Hendricks?"

"Here I am, my boy," the detective called out cordially. "Come right in. What's the news?"

The adept stood erect in the center of the room.

"You know," he began, "that Mr. Allen was to go to a private hospital up town?"

"Yes," said Hendricks impatiently; "go ahead."

"Dr. Burton came after him and brought him over in his own carriage. I did not have time to wire you to be at the ferryboat landing on this side, so I followed in a cab."

"Good for you! Bully boy!" exclaimed the detective excitedly. "Well?"

"The carriage when it left the boat on this side turned down town instead of up. The driver whipped up his horses and drove fast. I instructed my caddy to keep them in sight."

"And he did it, of course," put in the detective. "I see it in your eye."

"They stopped at a lodging house, 345 West Thirteenth street. They brought a cot out to the carriage and carried Allen in on it. He looked as if he were nearly dead."

Hendricks said nothing when Kola had concluded, and the adept, after studying the face of his master for a minute, sat down.

Dr. Lampkin swung his microscope to one side and began to place the glass slips into an envelope.

"Very strange, indeed," he remarked, his glance bent on his visitors. "A hospital certainly was the proper place for a man in Allen's condition. I wonder how Dr. Burton could hope to benefit him at a lodging house, and in such a quarter as that. Allen is not without means, it would seem. You'd better work on that idea, gentlemen."

"We can't go any farther in that direction now," said Hendricks impatiently. He rose and began to walk to and fro, his hands clasped behind him.

"You think not, sir?" said Kola, the animation gone from his countenance.

"No," answered the detective stopping at a window and looking into the street. "If you can't connect Allen with the crime by other evidence than we have so far, it would be folly to tackle him on his deathbed. Look here, fellows. You have two heads. Stick them together and tell me something—explain one simple, little thing. Give me a reason for the bullet from old Benton's gun being stopped by a rotten plank that would not impede the progress of a homeward bound honey-bee if it struck it a fair header."

The adept smiled gloomily and shook his head.

"It seems to me," jested Lampkin, "that you have bullet on the brain. I can see no reason why the ball may not have plowed through the ground, slowed up a little and then risen and struck the summer house."

"Bosh!" exclaimed Hendricks. "It went direct. It struck the wall at exactly the height of old Benton's armpit from the ground. For God's sake don't speak!" Hendricks whirled round from the window, his eyes dancing with excitement. "Doc, you have given me a glorious pointer! It is coming! Ah, ye gods, I have it—I have it! No, I am not exactly positive. I want proof."

Lampkin and the adept stared at him speechlessly as he began again to pace the floor, his hands linked and twisted together. Suddenly he stopped at the table and picked up the bullet.

"I say, Lampkin," he said in a voice that quivered, "put this under your glass and tell me if you detect on it corpuscles of blood."

Lampkin stared.

"By Jove!" he exclaimed. "An infant could have thought of that."

"You can bet your life an infant didn't," joked the detective. "I'm a veteran, I am."

"What is it?" asked Kola, rising into the light of the doctor's lamp.

His question was ignored. Lampkin's fingers trembled as he placed the bullet on a piece of glass and slid it into place. He seemed scarcely to breathe as he turned the piece of lead first one way and then another.

"Well?" said Hendricks, with bated breath. "Do you see any?"

"Hundreds of them," replied the doctor. "You may look for yourself. If you wait, I will scrape some off on to a glass and then you can see them more clearly."

"No; I'll take your word for it," said Hendricks. "Poor devil! He has had a hard time keeping his secret."

"Faced death to do it," too," said Lampkin. "For a long time he was afraid to confide even in a physician."

"I understand now," said Kola bashfully. "Shall you go to him?"

"Want to go, doctor?" asked Hendricks.

"I shouldn't like to miss the climax."

"Get your chapeau, then. Once more, old man, you have put me on the right track by an inadvertent observation."

CHAPTER XXII.

The three men took the Sixth avenue elevated to the Fourteenth street station and a crosstown car to Tenth avenue. No. 345 was a dismal, old-fashioned lodging house. The bell pull hung disconsolately in a socket worn too large for it. A slatternly woman answered their ring. Hendricks bowed.

"Is Dr. Burton here?" he asked.

A look of indecision flashed into the woman's face.

"There are no doctors living here," she said evasively. "It must—perhaps you have the wrong number."

She was holding the door only partly open, but the detective pushed by her and stood inside. The others followed him. The woman shrank back against the wall and stood still, her face turning pale. Just then a door at the end of the hall opened, and a middle-aged man came out.

"That is he," whispered Kola to Hendricks.

Dr. Burton came on and was about to pass by, but was stopped by a remark from the detective.

"I beg your pardon," said Hendricks. "Dr. Burton, I believe."

The man addressed shrugged his shoulders and frowned.

"You have the advantage of me, sir," he said. "I don't remember having seen you before."

"I have not had the pleasure of seeing you before either," replied the detective. "Minard Hendricks is my name."

What? You are the well-known detective?" exclaimed the physician.

"I was told," went on Hendricks, "that you had brought Mr. Brooks Allen to this house from East Orange today."

"That is a matter I cannot talk to you about, Mr. Hendricks," answered Burton, who seemed to have recovered from his astonishment.

Hendricks grinned and bristled.

"I don't care whether you talk about it or not," he answered, "but you may be unaware that in hiding Allen about in this way you are aiding a criminal to escape justice."

"What? Why, you don't mean that, surely!" exclaimed Dr. Burton.

"Allen killed Jacob Benton ten days ago and has ever since been suffering from the effects of a ball which passed through his body and lungs."

"Of course I shall offer no opposition," said Burton. "I had no idea Mr. Allen was injured till to-day. He sent me a message to come out to East Orange to see him. He showed me his wound and stated that he had accidentally shot himself and that it was to his interest financially to keep the fact from the Benton heirs. He was very weak and assured me he would explain it all satisfactorily when he was stronger. He said if the Bentons thought his life in danger they would not agree to sign certain papers. In other words, they would only be willing to give him his rights if they were

sure he would live long enough to be of service in introducing his inventions to the public. I knew nothing about his affairs, and the explanation seemed plausible enough to me. We started to go to a private hospital up town, but on the way over to New York he seemed to change his mind and begged to be brought here. It seems he knows the landlady."

"Did he bring any papers with him?" asked Hendricks.

"He had a small tin box, but I do not know what it contained. It was taken to a room up stairs. We were going higher up, but he was too weak to be carried farther, so we took him into the back room on this floor."

"How is he now?" asked the detective.

"Can't possibly live 24 hours," answered Dr. Burton. "He has lost nearly every ounce of blood in him."

"Well, I see no reason for making an arrest," said Hendricks. "I'll run up to that room and look around. Which is it?" he asked, turning to the landlady.

"Second floor, back," she answered. "I hope, sir, you won't blame me. I had no idea that Mr. Allen—"

"Not the least in the world," interrupted the detective, turning up the staircase. "Doctor, you and Kola wait for me in the street."

Twenty minutes later Hendricks emerged with a package under his arm.

"I have found the missing papers," he said. "They are all in apple pie order. Allen was a villain."

As they were walking toward Fourteenth street Lampkin asked:

"Will it be necessary to make the fact public that Mr. Benton intended to take his own life?"

"No," replied Hendricks. "You and Kola must never mention it. I promised Ralph not even to allow his sister to know. The other facts, along with Allen's slow death, will be enough for the bloodthirsty reporters."

At Fourteenth street Hendricks stopped.

"I must leave you," he said. "I see my car coming."

"Where now?" asked Lampkin.

"To East Orange," was the answer. "I want to tell the young people about Allen and return these papers. I like that boy Ralph, and Montcastle isn't half bad."

(The End.)

RUPTURE CURED.

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The Dairy.

We have a complete Dairy and Farm Creamery in constant operation on the Experiment Farm at Climax, Mich. This is personally conducted by J. H. Brown. All dairy correspondence should be sent to Climax, Mich.

For the Michigan Farmer.
COLOR IN BUTTER.

Much has been said regarding what gives milk and butter their color, some claiming it is the feed, others that it depends on the breed, but the queerest reason of all I noticed a few days since in an exchange.

The writer says: "Of one fact we are convinced beyond all others that belong to the conditions that surround the cow, and that is, that sunlight has a great deal to do with the color of milk." He claims that all cows, as a rule, make light-colored butter in winter, for the reason that they are shut up a large proportion of time in dark stables.

I would differ from the above for this reason: Our cows have a commodious stable, that is as light as most kitchens, having two windows facing the south, one in the east and one in the west, so if there is a ray of sunlight going the cows get it, and yet we have made white butter.

Our cows are grade Jerseys, and, generally speaking, make rich, yellow butter, but one year ago the continued drouth shortened our supply of corn fodder, so that a portion of the time we had to feed straw. The grain ration was the same while feeding both straw and corn fodder. As long as the cornstalks lasted we had yellow butter, but as soon as straw was fed, the butter was white. Now, the cows occupied the same stable, consequently had as much sunlight when fed on straw as when fed corn fodder. Why, then, was not the butter yellow?

It is very noticeable that as soon as the cows are out to grass in the spring, the butter is yellow. Is it the sunshine that causes it? This may be tested by taking the same cows and feeding for a stated time on nice, fresh hay, or properly cured corn fodder, in the stable. Then for the same length of time let them feed at the straw-stack, and see which method will give the yellow butter.

Of course, sunlight and plenty of it is a good and desirable thing, but I very much doubt its changing the color of the milk or butter. All will admit that most living things do better in sunlight than in darkness, and I do not think that cows are an exception. One great advantage of having the stable well lighted is that the consequent increase of warmth decreases the consumption of food, so that the cows can be wintered at less cost.

Whether light will make the butter yellower or not matters little, but whether the cows are kept in a damp, dark stable, matters much. Don't be afraid of letting in the light. Light is not cold.

Oceona Co., Mich. J. M. W.
(It is our opinion that feed and breed both have a material effect on the color of butter. We have no doubt that sunlight indirectly has its effect also. Of course, the feed given the cow is in a certain sense "bottled sunshine," and all three—cow, feed and sunshine—together make up the shade of color given the milk and its products.—Ed.)

For The Michigan Farmer.

ANOTHER PLAN OF SETTING MILK.

I have been a reader of your excellent paper for one year. Have been very much interested and have gotten many valuable hints about farming and various other topics. You have been very prompt and nearly every copy has reached me by Saturday evening's mail.

I have almost been tempted to put my pen to paper several times, but when I come in tired at night I hardly feel clearheaded enough to write anything interesting. In your Feb. 5 number I noticed an article on butter-making, and prior to this some quite interesting methods.

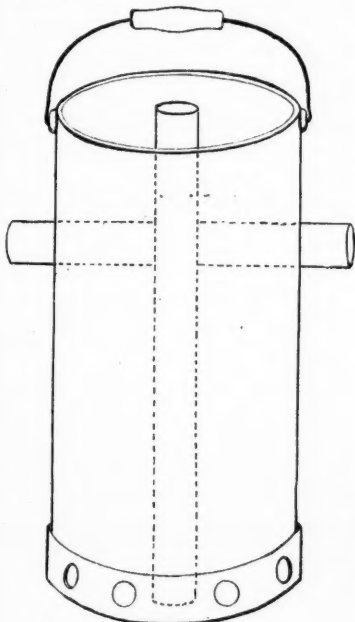
One correspondent signs her name, "Only One." Why did she not sign her own name? Her butter is worthy of a brand. She milks with as little filth in the pail as possible, I dare say. And right here let me say lies a very fine point in making good butter, creamery butter, cleaner. With its hundreds of different milkers, and milk hauled around in cans, all may not be properly cleaned from day to day, and milk is handed over to the creamery man in

all sorts of conditions. Oh, no! I'll order mine from the lady, "Only One," and dollars to cents I'll eat the purest article.

Why she failed in the deep setting I fail to see. And it is her extra care with her small pans that kept away flakes of dried cream in the product, making it uneven in color. I know of a farmer, with 18 cows, here in Erie County, Pa., that gets 25 cents a year round from customers in Erie city. They are glad to pay him that every week for his butter at their door, and his is no cleaner than the Michigan lady's butter.

You say she is deserving of a better chance and I say she is. And if all buttermakers would make her kind of butter, creamery butter would bring less in market, and much of the home article would be sold at the door of the maker for a fine price.

Of all the articles I have noticed, none has our way, quite. We have used shallow pans, but for ten years past use the deep setting can, with an air tube up through the center the size of a small quart cup, with a smaller tube at right angles from near the top and through the sides of the can, thereby allowing a current of air (unless set in water) through the middle of the can to assist in cooling quickly.



Our can is large enough to hold one milking or more, and after it is strained into the can, we add clear cold water—the well is about 42 degrees—right into the milk, thereby reducing its consistency. The cream, or butterfat, will all rise in from four to six hours if set in a cool place.

We keep in a cool cellar room in summer and keep the lid on the can, excluding air and all dust. We do not skim till it has stood 24 hours, as that is when we want the milk for calves and hogs, which require a little more on account of the reduced quality.

We first tried setting cans in a deep tank of cold water, but soon the well gave out. Next we put ice around the outside of the can; had "streaky" butter. Then ice in the milk in the can; same streaky appearance. But since we put in one-third to one-half water we have a good soft article of cream, that is churned in from two to three days, or better as soon as it is ripe. It gives us a nice even colored article and is mostly sold at our door.

With this method, July and August has no terrors, for our butter will stand up if not left too long out of the cellar. I have not put up any ice for five years. In this way we think we get all the cream, as the swirl-barrel would show if it was not all taken out.

Erie Co., Pa. J. L. CARTER.
(We have made a sketch of such a can as you describe, in order that our readers may see how the cooling process is aided in a pure, cool atmosphere. This does not aerate, however. This does very well under certain conditions, but we would not like it as well as to put these same cans into cold water. Neither could we get along without ice.

The only way for you to know that you secure close skimming of cream is to test the skim milk with a Babcock tester. At the same time you might test your buttermilk.

An actual test is what is needed on all dairy farms where butter-making is an important adjunct in the business of the farm.—Ed.)

WORLD'S BUTTER CHAMPIONS

EVERY ONE AN "ALPHA-DE LAVAL" USER.

THERE have now been six Annual Conventions and Grand Competitive Butter Contests of the National Buttermakers Association,—1892, 1893, (none in 1894), 1895, 1896, 1897 and 1898. The following is the list of years, places of convention, names and addresses of Sweepstakes Gold Medal winners, and the highest scores. Every prize winning exhibit has been "Alpha-De Laval" made butter:

1892,	Madison, Wis.,	LOUIS BRAHE,	Washington, Iowa,	Score 98
1893,	Dubuque, Iowa,	C. W. SMITH,	Colvin's Park, Ill.,	" 97
1895,	Rockford, Ill.,	F. C. OLTROGGE,	Tripoli, Iowa,	" 98
1896,	Cedar Rapids, Iowa,	THOS. MILTON,	St. Paul, Minn.,	" 97.82
1897,	Owatonna, Minn.,	H. N. MILLER,	Randall, Iowa,	" 98.5
1898,	Topeka, Kas.,	SAML. HAUGDAHL,	New Sweden, Minn.,	" 98

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State Journal of Agriculture.

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DETROIT, SATURDAY, MARCH 26, 1898.

This paper is entered at the Detroit Postoffice as second class matter.

THE DAILY "WORLD."

A CHANGE.

Commencing May 1, the Inter-state edition of the Daily World will be a regular 8-page paper every issue, and the combination price advanced to \$2. All who have subscribed and all who do subscribe between this and May 1 for the combination at \$1.50 (the present price) will get the advantage of the enlarged size for the balance of their time, from May 1, but the order must be received by us before May 1, as the price from that time on will be \$2. Get your orders in before May 1 and save 50 cents. Agents should take advantage of this change and push the combination. It will assist in securing orders for THE FARMER.

The Department of Agriculture's figures on the acreage and crops of various products of the soil show corn far in the lead with over 80,000,000 acres and a total yield of 1,902,967,000 bushels. Wheat comes next with 39,000,000 acres and 530,150,000 bushels; oats has 25,730,000 acres and a yield of almost 700,000,000 bushels; rye has 1,703,000 acres and 27,363,000 bushels; barley 2,719,116 acres and 66,600,000 bushels; potatoes 2,534,577 acres and 164,000,000 bushels. Hay takes an important place, with over 42,000,000 acres and a yield of 60,664,870 tons, being in value the third product, corn and wheat taking the first and second places respectively.

The statistician of the U. S. Department of Agriculture, referring to the value of the crops of 1897, said recently: "A careful estimate shows that in 1897 the farmers received for their wheat and other cereals \$130,000,000 in excess of such receipts for 1896 and at least \$80,000,000 more than in any year since 1892. The hay crop, although the largest, with one exception, ever raised in this country, commanded an increased price per ton." As a matter of fact the hay crop of 1897 has met with a very unsatisfactory market, with values ranging from 50 cents to \$1.50 per ton lower than the crop of 1896 sold for. The markets selected for the purposes of comparison are those of Detroit, Chicago, New York, Philadelphia and Boston. The statistician had better amend his statements so far as the hay crop is concerned.

WAR, AND ITS PROBABLE EFFECT UPON VALUES.

A correspondent writes us inquiring what would be the probable effect of a declaration of war by the United States on the value of farm products. Our correspondent evidently thinks a war with Spain is reasonably certain, and he wants to know just how it will affect his income. We are not at all sure that war will follow the present state of suspense, but if it does come the effect upon values of farm products will be governed very largely by the time it continues. A naval battle or two would not necessarily have much influence in changing values; but if an army of the size contemplated by the bill now before Congress, about 104,000, and embracing cavalry, artillery and infantry, is placed in the field, the effect would be felt at once in such articles as are necessary to equip and feed that number of men. Probably the first thing to feel the influence of equipping an army would be wool. There would probably be contracts given out for 250,000 uniforms, besides shirts, socks, blankets, overcoats, hats, etc. These would all have to be manufactured in accordance with samples furnished, and of a color and style of goods not kept in stock. The demand for wool would therefore be sudden and sharp. Then leather would be required for shoes, saddles, bridles, harness, and equipments for the men, and hides would advance in price with leather. In articles of food, the government supplies its army with hard bread, barreled pork and beef, bacon, coffee, sugar, and fresh beef and salt. These are called marching rations, and in camp are reinforced with various vegetables, soft bread, vinegar, etc. All these articles are of good quality, free from adulteration, and provided in quantity ample for even the ravenous appetite of a soldier during a campaign. The sudden and large demand that would at once be made for the articles enumerated above would be sure to advance values, and this would be reflected in higher prices for cattle, hogs, wool, hides, wheat, oats, corn, hay, and sugar. If any of our readers remember how these articles advanced in value when the Union armies were being organized and placed in the field, they will have some idea of what the result of declaring war with a foreign nation would be. Commerce would be more or less interfered with, and imported sugar and coffee would certainly go considerably higher.

Under present conditions we do not think it possible for values to reach the very high range of the years the late war was in progress. The country is larger now, its productive power much greater, and there is no probability that any such armies will be required. At that time, taking the Confederate and Union armies together, there was probably a million and a half of men either in the army or navy and connected with the administration of their affairs. The country then was much smaller, and many portions of it were so ravaged by the contending armies that its productive capacity was largely cut down. In the event of a foreign war it would probably be a small army, a large naval force, and the country at large but little affected, so far as producing was concerned, by the struggle. The highest range of values would probably materialize soon after war was declared, and future values would be gradually reduced when once the enormous productive capacity of the country was directed into the special lines which would be required for the use of the army and navy when engaged in active hostilities. That is what we think would be the effect of a foreign war upon the value of farm products.

BEET SUGAR.

The growth of the beet sugar industry should be aided in every possible way by the various states and the people at large. This should be done for three good and sufficient reasons: First, for the purpose of securing supplies of this great staple during a foreign war at fair prices; second, to take the sugar business of the country out of the hands of the trust which now controls it; and, third, to keep the millions of money at home now sent abroad for supplies of this article. It is therefore pleasant to hear of the spread of the movement to make the United States independent of foreign nations for a supply of this necessity, and it would not surprise us if this was accomplished within the next three years. So far as Michigan is concerned we look for three factories to be in operation within her borders by the close of 1899. The Michigan Sugar Company, of Bay City, is first in the field, as it has notified Land Commissioner French that it intends to engage in the business of manufacturing beet sugar in this State and that it will claim the bounty offered by the State for the manufacture of such sugar. This is the first notification the Commissioner has received under the new law. The Bay City concern expects to use 350 tons of beets per day, and to produce 1. per cent of sugar.

At the close of last year there were in operation in the United States nine factories, as follows: Rome, N. Y., daily capacity 200 tons of beets; Lehi, Utah, 350 tons; Norfolk, Neb., 350 tons; Grand Island, Neb., 350 tons; Alvarado, Cal., 500 tons, and Watsonville, Cal., 1,000 tons. The Spreckels interests are engaged in building at Salinas, Cal., a factory having 3,000 tons daily capacity and a dozen other new factories in California, Wisconsin, Kentucky, Iowa and Indiana are projected.

An eastern writer referring to the present and prospective status of this industry in the United States, says:

"This industry, perhaps more than any other except the chemical industries, is dependent upon skilled scientific superintendence for its successful development, and the circumstances that American capitalists are still largely dependent on foreigners for the machinery and superintendence demanded in the business has proved thus far a serious obstruction. These difficulties, however, are being gradually overcome, and it is almost safe to predict that a few years more of systematic effort will suffice to place the beet sugar industry in a position independent of foreign assistance for its development."

We look for some trouble to arise from the lack of skilled labor, versed in this special industry, as the building of factories increases the demand; but Americans have always proved themselves equal to every emergency which has arisen in the introduction of new industries, and we believe the labor problem will be solved in the sugar business as it has been in the manufacture of tin plate and other articles. The success of the beet sugar business will have a most important influence upon other lines of agriculture, as the by-products can be used to advantage in stock feeding, so that all of the crop can be utilized.

The friends of the Hawaiian annexation scheme in the senate made the assertion recently that Great Britain either wished to acquire the islands for herself, or with the intention of restoring the monarchy and placing the princess on the throne under British protection. The British minister at Washington, under instructions from his government, has called at the State Department and denied that Great Britain has any such intentions. It looks as if the statements made in the senate were intended to make votes for the annexation project, but will probably fail of success. It looks as if the

Hawaiian annexation scheme would either fail, or its consideration be postponed for the present. Probably the war scare is responsible for some of its friends changing their views. If the United States owned the islands now, how many new war vessels would be required for its protection? Or how many millions would have to be expended in putting up coast defenses? It would require as much outlay as will the whole Atlantic coast, and would prove a very costly gift to the people of the United States.

REPORT OF THE STATE COMMISSIONER OF LABOR.

Labor Commissioner Joseph L. Cox sends us a copy of the fifteenth annual report of the State Bureau of Labor and Industrial Statistics. In many respects we think this report the most interesting one yet published. It does not devote so much space to dry statistics connected with the various industries of the State, but the Commissioner has aimed to lay before the people as complete an exhibit as possible of the condition of the various industries, the people engaged in them, and suggestions as to how changes could be made for the material benefit of all concerned. Such questions as labor organization, strikes, child labor, sanitary regulations in factories, etc., are all discussed, and data regarding them collected and published in such form as to be easily understood. The topics discussed include the condition of employment in Michigan, average wages paid mechanics and laborers, questions relating to the employment of women and children, traveling men, fire departments, police departments, railroad employes, lake traffic, street railroads, city improvements, village statistics, electric lighting, gas and water plants, state penal institutions, agriculture, beet sugar, public school statistics, mines and miners, legislative measures regarding labor, and a large number of other subjects of minor importance.

Commissioner Cox is evidently a believer in the great advantages natural to Michigan, and that her future progress will be far in advance of her past. In his preface he says:

Every home-loving citizen of Michigan, from the "prince of labor" to the man of millions, have just cause to feel proud of the foremost ranking of our state, when considering its industrial and commercial conditions and its many natural resources and advantages as compared with those of sister states, and foreign countries as well.

We believe that we are fully sustained in our claims and that our reports that follow are backed up by facts and not fancies. While there is yet room for improvement and quite a number who are not as yet enjoying steady and lucrative employment, the condition of the toilers of our state is far better than for several years past. Capital has increased its investments many millions and manufacturers and business men speak more encouragingly. A spirit of hope is manifest amongst our agriculturalists, which has been substantially strengthened by a material increase in the price of all farm products, and their ability in many instances to meet some of their past due obligations.

The statistician can only account for the facts at the time of the canvass, and what the future years may do must remain hidden, though the prospects are indeed flattering, and all enter 1898 desirous that nothing shall clog the wheels that have been set in motion.

After a painstaking and careful investigation and a thorough canvass of the conditions of business in general and matters pertaining to the question of employment in Michigan, in which we have spared neither time, effort or money, and likewise after a systematic study of the reports and statistics from the bureaus of various other states, we find that none other can excel us, when all points have been considered.

We confidently believe that a thoughtful examination of the following chapters of statistics will aid in strengthening the confidence and hope of our citizens, and nerve them to further push investments in business enterprises that will furnish labor to our honest toilers, and thus increase the home market for our products.

The natural resources of Michigan seem to be almost inexhaustible, and the enormous discoveries in the past year demonstrates that Mother Earth intends to provide well for us. Just at a time when we were fearing a loss in our timber and lumber interests, great veins of fine steam and even hard coal have been found in the affected districts and elsewhere, and from beneath the very stumps and abandoned lumber yards is to be found that which will exceed in volume and value the former, or passing indus-

try, while the new business gives promise of furnishing steady employment to a larger number of men, at even better wages than were paid by its predecessor. Several new coal mines have been put into successful operation during 1897, and many more will be opened in 1898. Many new finds of iron ore and valuable veins of copper and even silver and gold are mentioned in the following reports on our mines, while the discovery of several important marl beds and of mica are not to be forgotten.

Mr. Arzo Fletcher, manager of the Ypsilanti creamery, died on Tuesday last as the result of an accident whereby he was badly scalded by steam from a boiler. Mr. Fletcher had made this creamery one of the most successful in the State, and its product always commanded the top price in the market. He was well known to Michigan dairymen, and his loss at the early age of 45 years will be deeply regretted by every one who enjoyed his acquaintance. His death is a distinct loss to Michigan's dairy interests.

A correspondent at Goodland, Mich., inquires how he can get free government seeds. Apply to the Congressman from your district. If he has sent out all allotted to him, then write the Secretary of Agriculture.

The Clydesdale horses, advertised on another page by R. E. Parsell, of Flushing, come from very choice stock imported by his father, O. W. Parsell, and selected for his own use, and sold because he is going out of business. With the growing demand for good draft horses, there should be money in these Clydesdales, as they have always been favorites in this State.

RESOLUTIONS ADOPTED AT THE ROUND-UP INSTITUTE.

The following resolutions were adopted at the late Round-Up Institute, and are printed as showing the position taken by the farmers present on the various subjects referred to:

It appears, from the successful result of three years' efficient work in almost every agricultural county in this State, that the Farmers' Institutes furnish the best means for the advancement of agricultural education; and, whereas, we believe the experience of the past three years in this work demonstrates the fact that there is a growing demand for the continuance of the work in the future, and that the advancement already made along the line of educational benefits to our agricultural population may be maintained and increased.

Resolved, That we most respectfully petition our honorable Senate and House of Representatives to make appropriations ample in amount to carry on this important educational work, with its increasing demands.

Resolved, That a copy of these resolutions be signed by the Chairman and Secretary of the Michigan State Farmers' Institute Society and be forwarded to our Representatives and Senators at Lansing at their next session, as a wish of this representative body of farmers now in session at the Agricultural College, Michigan.

Resolved, That we commend the holding of conference meetings of Institute workers, and of officers and delegates of the local Institute societies, as a great feature of the Round-up meeting for future good to the local Institutes.

Resolved, That we favor the continuance of the practice, by the general Government, of the free distribution of seeds and grains, and that we do highly approve of the efforts of the Secretary of Agriculture put forth to secure foreign markets for our surplus products, and that we do truly appreciate his efforts to advance the agricultural interest of the country.

Resolved, That in view of the splendid fight that is being waged by our Dairy and Food Commissioner for the suppression of the sale of oleomargarine, that we appreciate his labors to that extent that we encourage and support him whenever we can be of aid to him in his efforts or suits. And further, that we commend the Insurance Commissioner for his valiant service, and will support and encourage him whenever we can.

The following resolution was reported by the chairman of the legislative committee of the Michigan State Federation of Women's Clubs, and unanimously adopted:

Resolved, That we, the members of the Michigan State Round-up Farmers' Institute in convention assembled, do favor the reform work relating to the State charitable institutions which has been taken up by the women organizations of the State, namely, that women be appointed on the Boards of Control, and, as far as practicable, women physicians be employed in all institutions where women and girls are confined.

Further resolved, That we pledge our hearty support to this cause, and ask that our next Legislature pass these just measures.

Also the following resolutions and recommendations reported from the Women's section of the Institute were adopted:

Resolved, Wherein it has pleased Almighty God in His infinite wisdom to call home our beloved sister, Frances E. Willard, to her well-earned rest,

Therefore, we, the representative women of the Farmers' Institute of Michigan, offer our heartfelt sympathy to the family of the deceased, the W. C. T. U., and all organizations for the uplifting of humanity.

Furthermore, be it resolved, That these resolutions be placed on file on the records of the W. C. T. U., in the Women's Temple, and the records of our State Institutes.

The committee recommends the printing of a limited number of copies of the very excellent paper on "Consecrated Parentage," read by Mrs. Belle M. Perry, of Charlotte, Michigan, to be judiciously distributed. The social purity clubs, child study clubs, college and high school organizations, and societies of a similar nature to be the medium.

We further recommend a committee of the following women to be appointed to supervise the publishing and distribution of this paper: Mrs. Mary A. Mayo, chairman; Dr. Mary Wood-Allen, of Ann Arbor; Mrs. Emma E. Fox, of Detroit; Mrs. Anna M. Palmer, of Saginaw; and Miss Edith F. McDermott, Agricultural College.

Legal Department.

CONDUCTED BY EARL D. BABST,
56 Moffat Building, Detroit.

Removal of abandoned telephone poles.—J. P. Okemba, Mich.—A section of telephone line is abandoned, but wire is left on poles. Must people owning roadside leave the useless wire and poles to interfere with convenience of working same?—Make complaint to the highway commissioner who may proceed to have poles removed in the manner provided for the removal of obstructions in the highway.

Locating road through orchard and cemetery.—I. M. De Witt, Mich.—Can a road be opened by force through an orchard of five years' standing, or through a cemetery?—No plank road or railroad company can locate their way through an orchard without the owner's consent. Public roads, however, may be located through orchards, but no highway can be opened through a cemetery without the assent of its board of directors.

Wife need not sign purchase money mortgage.—J. L. Layton, Mich.—A buys a farm from B and gives a mortgage in part payment, but A's wife was not present to sign the mortgage until a few days afterward and her signature was not acknowledged. Is the mortgage good?—Any mortgage is valid between the parties, even without witnesses. It is not necessary that a wife should sign a purchase price mortgage at all to make it valid.

Division of property—Tax on dogs.—Subscriber, Jeddo, Mich.—A certain estate has fallen to four heirs. If A buys out one of the four for less than her share should bring, can A force, by law, the other three to sell, each for the same as the first did?—No. 2. Is there a law to compel a taxpayer to pay tax on male or female dogs?—The legislature, at the session of 1895, imposed an annual tax of one dollar for every male, and three dollars for every female dog owned or kept by one person or family.

Contents of lost lease may be proven by parol.—W. H. Mc., Germfask, Mich.—A owns a farm and rents it to B. They go to a notary public and have him draw up a lease which was left in his care to be called for when required. When A asks for the lease C cannot produce it, claiming that it had been burned in the stove. If A is damaged, can C be held responsible for A's loss?—The contents of the lost lease may be proven by parol evidence, and the costs attached to such proof should be assessed to notary, but this is a matter resting in discretion of the court. The notary would not be liable in damages unless he had destroyed lease willfully, and you were unable to prove contents. Proper procedure is to notify all parties to lease at once by personal service of written notice of such loss, and stand ready to prove contents if necessary.

District school board has no power to build belfry.—Reader, Albion, Mich.—We have had socials to raise money to buy a bell, intending to put a belfry on by direct tax. Some object and threaten to vote us down to three months school. Has the school board a right to put a belfry on the school house?—The building of a belfry must be regarded such a permanent improvement as to be beyond mere "expedients," which may be purchased by the director, as included in necessary repairs which may be undertaken by the board. It must be ordered by tax voted for that purpose. Section 562 of Howell's Statutes, subdivision 11, provides that school must be held five months in every school district on pain of forfeiture of share of primary school fund.

Franchise of electric roads along highway—Consent necessary.—Subscriber, Ann Arbor, Mich.—I. Has an electric street railway a right to run on the highway without the consent of farmers owning land along the road?—Yes. Such companies must first obtain the written consent of the supervisor and a majority of the commissioners of highways through whose district the proposed road will be built. Such consent may be accompanied by regulations as to construction, location, maintenance and operation, but no regulation shall prevent or obstruct the free use of the highway by the traveling public. 2. Can he dictate in what part of the road they shall run?—No. The location is determined by franchise, obtained as above. 3. Are they obliged to make crossings to fields?—No.

Descent and Distribution of Property of Widow—Of Married Man.—Subscriber, Clio, Mich.—I. If a man marries and has no children, is he, under the laws of Michigan, entitled to any of his wife's property if he survives her?—As to real estate, one-half goes to the widow and the other half to the father and mother in equal shares, or if but one parent be living one-half goes to that parent alone. If neither of the deceased wife's parents be living their half goes to the brothers

and sisters in equal shares. If there be neither father, mother, brothers nor sisters living the widow takes the entire real estate. The personal estate descends as follows: One-half to the husband and one-half to the deceased wife's father. If her father is not living his half goes to the mother, brothers and sisters in equal shares. If neither father, mother, brothers nor sisters be living the husband takes all. 2. If a married man dies without issue can his wife hold more than one-third of his property?—Yes. The widow may elect to take her dower which is a life interest in one-third of her husband's real estate, or she may take an absolute interest in his real property according to the statutory provisions. This is the same interest which the husband takes in the wife's realty as given in question one. The personal property, if it does not exceed \$1,000, goes to the widow. Personal property in excess of \$1,000 descends as in the case of the husband, as given above.

Interest on past due installments of interest—Contract rate of interest continues after maturity.—Subscriber, Memphis, Mich.—"One year after date I promise to pay B. or bearer one hundred dollars with interest at 8 per cent." Note was given five years ago and there has been no interest paid. What amount can B's administrator collect?—Interest on past due installments of interest is lawful, but not on interest's interest. The rate after maturity would be 8 per cent, the contract rate.

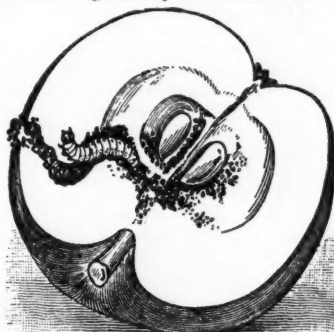
\$1.00	\$8.00	.64	\$8.00
.08 per cent	.08 per cent	4 years	2.56
\$8.00	.64	\$2.56	\$10.56
\$10.56 interest due end of fifth year.			
9.52 interest due end of fourth year.			
9.28 interest due end of third year.			
8.64 interest due end of second year.			
8.00 interest due end of first year.			

\$46.40 total interest due end of five years.
\$100.00 principal.

\$146.40 total due end of five years.

SPRAYING FRUIT TREES.

The question of spraying fruit trees to prevent the depredations of insect pests and fungus diseases is no longer an experiment but a necessity.



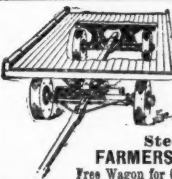
Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which may be had for the asking and contains much valuable information.



EUREKA WINDMILLS
have stood the test for 25 years. In use all over the world. We make all styles, steel and wood mills for pumping and power. Steel towers, Tanks and windmill specialties. Our goods are fully warranted. Smith & Pomeroy, Mrs., Kalamazoo, Mich.

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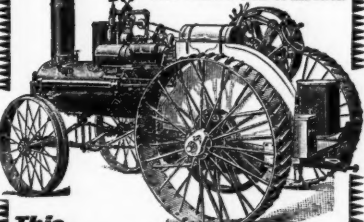
E. C. NASH, Three Rivers, Mich.



Low-Down, Broad-Tire
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The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD.

We should be pleased to have any of our readers who take an interest in household topics, send in their views and opinions upon any subject which is under discussion, or which they wish discussed. The invitation is general, and we hope to see it accepted by many. Address all letters for The Household to Mrs. Ella E. Rockwood, Flint, Mich.

THE LOST CHORD.

(By Adelaide Ann Proctor.)
Seated one day at the organ,
I was weary and ill at ease;
And my fingers wandered idly
Over the noisy keys.

I know not what I was playing,
Or what I was dreaming then;
But I struck one chord of music
Like the sound of a grand amen.

It flooded the crimson twilight
Like the close of an angel's psalm,
And it lay on my fevered spirit
Like a touch of my infinite calm.

It quieted pain and sorrow
Like love's overcoming strife,
It seemed a harmonious echo
From our discordant life.

It linked all perplexed meanings
Into one perfect peace,
And it trembled away into silence,
As if it were loath to cease.

I sought, but I seek it vainly,
That one lost chord divine,
Which came from the soul of the organ
And entered into mine.

It may be that death's bright angel
Will speak in that chord again;
It may be that only in heaven
I shall hear that grand amen.

MORE ABOUT THE GOOD INSTITUTE.

REPORT OF WOMEN'S SECTION AT THE ROUND-UP FARMERS' INSTITUTE HELD AT THE AGRICULTURAL COLLEGE, FEBRUARY 23, 24 and 25.

Thursday afternoon's session opened by audience rising and repeating the Lord's prayer in concert.

The first paper was "The Relation of the Mother to the Country School," by Mrs. Mattie A. Kennedy, of Slocum.

Mrs. Kennedy said that mothers should sustain a relation to the child, to the teacher, to the school, and to the nation. That they should teach the child the history of life themselves and not leave them to learn these things from a vicious source. That they should give to the teachers their loyal support as long as they deserve it, and demand a high standard of scholarship and ability from them. That we owe a relationship to the school that should be manifested by careful training of our own children to truthfulness, obedience, and cleanliness, that their influence might be good. By giving them pleasant surroundings, by visiting the school and by contact with them know how they are being taught. They should attend school meetings and use their influence to secure better appliances and a standard of teachers' excellence not based upon price of services. We owe it to the nation to teach patriotism and see that the Stars and Stripes float over them; teach them to honor that flag as something sacred and that they must bear a part hereafter in sustaining the dignity and purity of the nation of which that flag is the emblem.

In the discussion which followed Mrs. Stiles Kennedy said she considered the relation a very important one. That we should look closely after our children and see that the teachers are doing their best for them.

Mrs. Post thought where mothers were too busy the next best thing was to invite the teachers to our homes and acquaint ourselves with them and they with the children's homes.

Mrs. Mayo thought we should look well to personal appearance that they be neat and tidy. That there were times in every boy's life when he does actually object to soap and water and the teacher would teach many lessons of cleanliness by personal appearance.

Mrs. Haner believed that fathers and mothers should be more careful of their appearance, as children were great imitators.

Mrs. Mayo asked if the audience believed in putting women on school boards.

Mrs. Perry believed most emphatically in putting women on school boards. Their help and influence are needed there.

Mrs. Rose thought they should be on school boards and attend school meeting and vote.

Mrs. Worden thought women should study school law and vote intelligently.

Mrs. Lester asked how many of the audience thought women should at-

tend school meetings. About two-thirds arose.

Mrs. Mayo asked how many actually attended. Seventeen arose.

Prof. Edith McDermott thought we should see that the teachers used good pure language, that they did not embellish their talk with slang and unnecessary phrases, as children were great imitators of older people.

Mrs. Mayo then introduced Mrs. Rose, of Mason, who said that for four years a movement had been on foot to get women appointed on boards of control and as physicians in all state institutions where women are confined. They had not been successful in getting a bill through Congress but the governor had already made some appointments in that direction. She presented a resolution that had been adopted by the State Federation of Women's Clubs in effect that "the women's section of the State round-up favor reform work relating to state institutions, namely, that women physicians be employed where women and girls are confined. This resolution was unanimously adopted.

The paper, "Consecrated Parentage," by Mrs. Belle M. Perry, of Charlotte, was a grand one. The woman who could listen to that paper and behold the queenly presence, the regal womanhood of its author and not have a wish to live a better life would be something outside the experience of the writer. (We hope to be able to give this paper in full to the readers of the Household next week.)

Mrs. Mayo thought that unless there were some very pointed questions to be asked it would be better to leave the subject just where it was and take the impressions home with us just as Mrs. Perry left them. The feeling prevailed that we had nothing to discuss, so complete had been the talk.

A committee was appointed to draft suitable resolutions upon the death of Frances E. Willard, and this being done the meeting adjourned until the next afternoon.

FROM A NEW CONTRIBUTOR.

Our editor's words on washing flannels were just what I needed, as I had been trying to find a method that was entirely safe for fine flannels. We have just bought our flannels for next winter, as by purchasing of a reliable home merchant we can secure them at this season at quite a discount. The best is the cheapest in the long run, and my present flannels are serving their fourth winter term. In the union garments have we not reached the ideal for health and comfort?

I wish we might have a discussion of corset substitutes. I have used one make for five years that I consider perfect in everything but price; still, perhaps, the wearing qualities compensate for that. No steels, full front, buttons for supporting skirts, and stays easily removable for washing. Can any of the sisters tell of one that meets these requirements and yet low in price? I have just discarded side hose supporters as a nuisance and returned to the old, old style.

Now, with yoke petticoats, and comfortable dresses, skirts and waists either hooked together or united in the making, what more is needed to complete a comfortable outfit? Oh, yes; low heels, or, still better, spring heels will relieve many a woman of that dreaded backache brought on in her ceaseless round of duties by that constant jarring as the hard heels strike the floor. Our Creator intended we should stand upon two arches, but we in our ignorance have put a post under one extremity of each arch and have gone hobbling along in vain pursuit of Dame Fashion.

I almost envy the little girls of the present day whose mothers are dressing them according to common sense dictation, and sigh in vain regret for good health which might have been mine had I been given the education in anatomy and hygienic laws which every child, especially every girl, should have. Mothers, of what use is it to warn your daughter against running up and down stairs, jumping rope, lifting beyond one's strength, etc., unless you also teach them something of the organs which they are thereby injuring for life? "Had I only known!" How many a daughter grown to maturity moans it, and "Had I only taught her!" would the mothers mean also, could they only know the heartaches of those daughters as they go about their work confronted by tasks which require strength of body and mental vigor and feel themselves unable to make of their home what

they know it might be if they had good health and spirits.

Well, Mrs. Grace, how long will it take us all to learn that there is one Righteous Judge who "knoweth our infirmities," and that it is to Him we are to render our accounts and not to our relatives and neighbors? I recall now the oft-repeated praises bestowed in my presence upon an "ambitious" neighbor who could board hired help, milk several cows, feed eight calves, make her garden, raise a multitude of turkeys, chickens and geese, all unaided by any hired girl, and be ready for unexpected company besides. Now, while I have gazed in awe and silent admiration at such an exhibition of energy, I am not at all surprised at her present enfeebled condition and at her physician's statement that she cannot recover without a critical operation by an expert surgeon. Nor am I sorry I was not fooled into trying to follow the example placed before me, for while my enthusiasm finds vent in housekeeping, making my own garden and raising poultry, I draw the line at milking and feeding calves, not because it is beneath my dignity, but "enough is enough."

Will some of our readers please give directions for making gravies, puddings, sauces, etc., by mixing the flour and fat first, then adding the water? Mine is sure to be lumpy, so I have to stir the flour into the water first. Wherein does the secret lie?

MRS. RURAL.

MRS. MAC. IS GARDENING.

I have been gardening this morning. The snow is deep and it is still snowing, but I have been enjoying summer sunshine and bright blossoms. I have planted seeds of pansies, primulas, dianthus pinks, verbenas and tomatoes. How I shall enjoy watching for the tiny brown seeds to awaken. I do not see how anyone can get along without flowers, although I think there is nothing more distressing than a window full of dirty, sickly-looking plants. I think we try to winter too many plants for the success of any. I think very much of my palm, it always looks so bright and cheerful with its fringe of Athoua about the edge of the pot. If anyone wants a few nice flowers it is better to plant them in tubs and boxes than in the open ground. Last summer I had a tub of red geraniums, bordered with Othonna, and it was a cheerful sight with its mass of red blossoms. The Othonna massed itself over the tub until you could see nothing but yellow stars and round green leaves. I had another tub of white double petunias that pleased me very much with their glory of sweetness, and they hold their sweetness until late in the fall. Verbenas make very nice tub plants, and so does the climbing nasturtium. But any flower is pretty grown in this way if you edge the tub with some hanging plant. It is best to set the tub on a short block of wood, and be sure to make two or three holes in the bottom for good drainage. Water freely and you will be well pleased. My tubs are barrels sawed in two.

Faith and hope are ever the cheerful companions of the flower lover, and I sometimes think they are the pillars which hold and uplift humanity. No matter how low or sad we become, if we will only listen to the tender words of Hope

and Faith we will be able to overcome evil and trouble; and when everything earthly is slipping from our grasp. Hope will bring us the beauties of heaven to view, and sweet Faith will whisper to us messages of trust and love from our Father.

MRS. MAC.

AN ECHO FROM THE INSTITUTE.

Last month I attended the Round-up Farmers' Institute held at the Agricultural College, and am henceforth and forever a believer in State Institutes. The audience was not what one might call "mixed," but composed of representative men and women from all parts of the State; earnest and thoughtful workers who are striving for the best interests of the farm and home.

The influence of such a gathering can hardly be over-estimated—it does not cease with the closing of the session, but will find its best expression in the new impetus given to local work.

It seems impossible that anyone could fail to be strengthened and encouraged by a meeting so successful in every way. There is food for thought for many days to come—the knowledge gained cannot be assimilated all at once, but must be given time to digest properly.

A woman's session was held each afternoon and there I met many beautiful women, who will never be forgotten, even if I do not meet them again. The contact with people of wider experience and greater knowledge than our own is always refreshing.

Not the least delightful feature of this part of the Institute was the meeting of our editor, and the privilege of listening to a cheery, helpful talk, brimming over with a sympathetic understanding of the perplexities which farmers' wives must encounter.

By way of expressing my appreciation, I am resolved to write to the Household as often as I think your good nature and the editor's sense of the fitness of things will permit.

V. I. M.

A CHATTY LETTER.

Did the sister who has to put up dinners ever try a custard pudding? Make it solid, eight eggs to a quart of milk, sugar and nutmeg to taste. I think the men will enjoy it. Or try rusk. Take a sufficient quantity of light bread sponge, add to it a cup of sugar and one-half cup lard, grate in some nutmeg also; when light, make into biscuits, let rise and bake. The same dough will make good fried cakes. Roll out the light dough, cut into strips as big as your finger, let rise again, and fry in hot lard. Don't have your lard too hot, but give them a chance to swell before a crust is formed.

I use outing flannel a great deal. I make boys' waists, girls' skirts, panties, nightgowns, baby dresses, men's shirts, undershirts, and in fact most everything out of this goods. It makes the nicest soft diapers for a baby; so easily washed and no need to iron them. I can slight my ironing with a good grace when I consider that it spoils the pretty nap on the goods to iron it. I also make winter wrappers for myself out of it, choosing a dark, plain goods, and the same for my little daughter's dresses.

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SISTER MARY.

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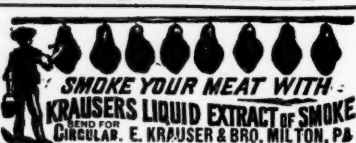
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MINTA'S IDEA OF A LADY.

As I was reading Elizabeth's article in the Household on "Stuck-up People, and Those Who Think Them So," a few thoughts came to me about the ideal lady. I think any true woman will speak to those she knows, whether they be high or low in the social scale. Our Saviour went among the lowly, and were all to take Elizabeth's so-called lady for an example there would be very little good done in this world. But there are many noble women who are doing a great work among the poor, and they certainly are not afraid to speak to their inferiors. It does them good to think they can bring a ray of joy to some poor heart by recognizing them and trying to help them.

As for talking about cows, pigs and Plymouth Rock roosters, we may better talk about them than about our neighbors. We have a few of the kind of ladies Elizabeth tells about down here in this part of the country; but it is getting pretty well civilized here, and I think it will not be long before they are a thing of the past.

MINTA.

TANNING SKINS.

Take a fresh skin, scrape off all fat and flesh that is possible without injuring the skin. Then take equal parts of salt and alum (pulverized) and rub the skin thoroughly. The finer the salt and alum are made the less it will take. Fold each side to the center, roll fur or hair outside, and lay away for two or three days. Then open and scrape thoroughly, being careful not to cut the skin. Apply the salt and alum as before, laying away for two or three days, then scrape. Repeat till sufficiently tanned. The third scraping ought to nearly, if not quite, make the skin ready for use if properly scraped to begin with.

A SUBSCRIBER'S WIFE.

ANOTHER WAY.

Here is the way that I have made bread for years, and always have had good success: At noon place in a quart bowl one cake of yeast foam; add enough lukewarm water to fill the bowl one-half full and let stand one hour. Then mash carefully with a spoon, to be sure no lumps remain, and stir in enough flour to make a thick batter, beating well. Set in a moderately warm place to rise. Save your potato water at noon, mash three medium-sized potatoes, stir in potato water and enough water to make two quarts in all. At 5 p. m. stir the yeast into this; 8 p. m. fill a medium-sized bread pan half full of flour, make a hole in the middle and pour in the yeast, add one tablespoonful each of sugar and salt. With a strong iron spoon stir in gradually enough flour to make a moderately stiff batter and beat vigorously. Then dust some flour over the top, press a common pan over it and set near the stove, but do not let it get too warm. At 6 a. m. it should be very light. Now add one tablespoonful of lard, and mix in the flour remaining in the pan, adding more if necessary. Knead thoroughly for twenty minutes and set away to rise. When light (the pan should be nearly full) divide into loaves, knead very lightly, place in greased tins, which should not be quite half full, grease the loaves with melted lard, let rise until nearly full and bake from forty to sixty minutes, according to size of loaves. Remove from pans and wrap in several thicknesses of cloth. If the crust is baked too hard when taken from the tins rub it carefully with lukewarm water and cover it up good. A good quality of flour, fresh yeast and careful attention to these directions must result in sweet, delicious bread, which will keep well and will not dry out.

PINY.

WIVES WANTED, BUT NOT THE NEW WOMAN.

Over 40 years ago I was married to a typical "yankee school marm," and for a honeymoon trip we traveled for days with an ox team to found a new home, and when we got to our claim we sought shelter in a neighbor's cabin until we could build a house for ourselves. Yet we have cleared three farms in Michigan, and have a good home in the city for our old age.

Now this is of no importance of itself to others. I simply wish to contrast this experience (and that of thousands of others) with the wonderful change in our social life of 45

years. I made a statement at a meeting of farmers asking if there is a single girl now-a-days of ambition or any education who would marry a young man to be a farmer's wife (no matter how good he is) for a bonus of \$5,000 to be invested in a farm. No one replied, but a leading farmer's wife (who had a large family, but all have left her to seek positions in the city) said, "I never want my daughters to drudge as I have done on a farm." I told her there were not enough lawyers, doctors and ministers to go round, and that 50 per cent of the laboring men of the cities have their wives and daughters working in factories to eke out a living. Girls will want homes and not be hirelings all their lives.

Young men of ability who want to be farmers have a hard time of it now-a-days. I know several who are money makers and good citizens in every way, who are disgusted with "baching it," and as there is but little satisfaction in farming it without a wife, what are they to do? But the unmarried all rush to the cities, pell-mell together.

If the best blood of the country is to go more and more to the cities the country population will be composed of a class of peasants, as in Europe. The elder Mr. Woodman says in his lectures that this is his conclusion unless the Grange can do more effectual work than it has. Can one blame people to prefer the city when there is so much in a social way to captivate? I sat last night at the entrance of an opera hall. It was a study to see the crowds of people of all sorts and conditions enter, and to see that they could laugh and enjoy so much in the comic entertainment. At the other hall of a thousand seats a high school concert was well attended, also a church revival was in progress. These people could work all day and have entertainment at night, but how could coun-

try people attend without inconvenience?

Is there a remedy? I can only give my own experience. Four years ago we moved to the city, not expecting to make any money, but have been agreeably disappointed. We have increased our profits and gained much experience of the lives of all classes. In the long winters life is insufferably dull in the country, but I would not advise any one to try city life unless he is free from debt.

Now, if there is a single girl in the State of Michigan who is enamored of farm life, let us hear from her through The Farmer.

Grand Traverse Co.

H. VOORHEES.

CONTRIBUTED RECIPES.

Delicious Hickory Nut Cake:—One cup granulated sugar, one cup sour cream, one teaspoonful soda, two eggs, pinch of salt, two cups sifted flour, teaspoonful lemon extract. Bake in layers. Beat one-half cup sweet cream and one cup granulated sugar, flavor with lemon. Spread on cakes and cover with whole hickory nut meats. Put the cream on top layer and put meats and small candies around.

Home-Made Crackers:—Beat two eggs very light, sift into them one quart flour, teaspoonful salt. Add one tablespoonful each of butter and lard and nearly one tumblerful of milk. Work all thoroughly together. Take a fourth of the dough at a time and roll out as thick as a milk cracker, cut in small rounds and bake quickly to a light brown.

NO NAME.

MORE ABOUT CLUBS.

In response to my query some weeks ago about forming a club in a country neighborhood I have received much useful information through these columns. As I have been collecting club hints from all directions will describe

one that a friend recently told me about.

The members number twelve or fourteen, and as their homes are all quite far apart most of the ladies go with their own conveyance, so they only meet once each month—the first Thursday occurring in the month being "club day." As they have no hall or regular place of gathering they meet at the homes of the members in turn; the lady at whose house they assemble provides the supper, which is not elaborate. Right here I will state that in the case of one society which I learned of some of the ladies made such extensive preparations for supper that in order to quell dissatisfaction that had arisen from this source by-laws were added to the effect that the suppers should consist of biscuit or bread with cold meat, one kind each of pickles, cake, sauce, with a salad, and tea or coffee. Lemonade was permissible in summer.

At the first mentioned organization all come prepared to do sewing for their hostess—perhaps it will be comfortable to be tied, quilting, sewing carpet rags or even mending or knitting. One or two are appointed at a previous meeting to be prepared to entertain by reading, reciting, etc. At the roll call each responds with a quotation from the Bible. Their motto would be well for us all to adopt, even though we may not be members of this thriving country club: "Speak well of all, or not at all."

M.

We devote the space usually occupied by Home Chats to a report of the women's section, Farmers' Institute, again this week. Several letters are crowded out of this issue, but will appear all in good time.

Will some one tell through the Household how to whiten the keys of an organ that have become yellow?



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The Markets.

WHEAT.

The week ends with a dull feeling in wheat, and a drop in the range of prices since early in the week. At the moment there is nothing in sight to hold up values—even the weather being on the side of the bears. Foreign markets also show signs of weakness; but the outlook may change completely in twenty-four hours. Mr. Leiter seems to be able to hold up values of contract wheat in Chicago, and his movements constitute the only interesting feature in the situation at present.

The following table exhibits the daily closing sales of spot wheat in this market from March 1 to March 24 inclusive:

	No. 1.	No. 2.	No. 3.
Mar. 1.....	97 1/2	98	94 1/2
" 2.....	96 3/4	97 3/4	94 1/2
" 3.....	96 3/4	97 3/4	94 1/2
" 4.....	96 3/4	97 3/4	94 1/2
" 5.....	97	98 1/2	94 1/2
" 6.....	96 1/2	97 1/2	94
" 7.....	96 1/2	97 1/2	94
" 8.....	96 1/2	97 1/2	94
" 9.....	96	97	94
" 10.....	94 1/2	95 1/2	92 1/2
" 11.....	94	95	92 1/2
" 12.....	93	95	91 1/2
" 13.....	94	95 1/2	92
" 14.....	93	95	91 1/2
" 15.....	93 1/2	95 1/2	92 1/2
" 16.....	95	97	93 1/2
" 17.....	94 1/2	96 1/2	93
" 18.....	94	96	92
" 19.....	94 1/2	96 1/2	92 1/2
" 20.....	93 1/2	95 1/2	91 1/2
" 21.....	93 1/2	95 1/2	91 1/2
" 22.....	93 1/2	95 1/2	91 1/2
" 23.....	93 1/2	95 1/2	91 1/2
" 24.....	93 1/2	95 1/2	91 1/2

The following is a record of the closing prices on the various deals in futures each day during the week:

	May.	July.	Aug.
Friday.....	97	83 1/2	80 1/2
Saturday.....	96 1/2	83 1/2	80
Monday.....	96	82 1/2	79
Tuesday.....	96 1/2	83 1/2	80
Wednesday.....	95 1/2	82	79
Thursday.....	94 1/2	80 1/2	77 1/2

The visible supply of wheat on Saturday last in the United States and Canada was 3,417,000 bu., as compared with 3,415,000 bu. the previous week, and 40,430,000 bu. at the corresponding date last year. The decrease for the week was 998,000.

Mr. Leiter is reported to have ordered 1,500,000 bu. of his wheat loaded for shipment. He expects navigation to open by April 1st, and says that by the 15th he will have all his wheat, 10,000,000 bu., on its way to eastern and foreign markets. If he can, do this the shorts will surely get badly squeezed on their May contracts.

Total shipments from Argentine last week were 952,000 bu., as compared with 848,000 bu. last week, and 304,000 bu. for the same week last year. The visible supply in that country at the end of the week was 3,720,000 bu., against 720,000 bu. at same date last year.

Southern Russia is said to be suffering from severe weather.

California has been visited with severe frosts, which have done much damage to fruits, and is said to have injured wheat also.

The Corn Trade News says: The Hungarian minister of agriculture reports that crop conditions in the monarchy improved during February, the prevailing mild weather having been favorable.

Beerbohm estimates the maximum weekly requirements of flour and wheat by Europe for the remainder of the season at 6,400,000 bu. and probable shipments at 5,680,000 bu.

The Liverpool Corn Trade News gives the following estimate of shipments of breadstuffs the past week: From United States, 2,958,000 bu.; Russia, 1,330,000 bu.; Roumania, 632,000 bu.; India, 208,000 bu.; Argentina, 352,000 bu.; various, 406,000 bu. Total, 7,088,000 bu.

The demand for American oats in France is growing into large proportions, and will necessitate heavy imports.

Italy continues to buy foreign wheat. In December 190,000 qrs. were imported, against 130,000 qrs. in December, 1894, making the total for the year 1897 1,900,000 qrs., against 3,250,000 qrs. in 1896.

The prospects for the winter wheat crop in Russia are said to be very good so far.

DAIRY PRODUCTS.

BUTTER.

The market shows a weakening tendency on ordinary and low grade dairy stock, but prime dairy and creamery are firmly held. It looks now as if the spring would be a very early one, and that pastures would be available several weeks in advance of last season. Of course, this is not an assured fact, but facts favor that view; if this should prove true, we may look for a sharp decline in winter made goods before long, as the advent of grass butter always has this influence on the market. It is time, therefore, to clean out accumulated stock, and be ready for this phase of the trade. Quotations in this market are as follows: Creamery, 18@20c; fancy dairy, 16@17c; fair to good, 13@15c; common, 11@12c; low grades, 8@9c per lb. At Chicago the butter market is very quiet, with a slight decline in creamery since our last report. Dealers are looking for increased receipts as the result of the warm weather, and are rather bearish at present. Quotations in that market on Thursday were as follows: Creameries, extras, 18c; firsts, 16@17c; seconds, 13@14c. Dairies, extras, 16c; firsts, 12@14c; seconds, 10@11c. Ladies, extras, 11@12c. Packing stock, 10@10 1/2c; roll butter, 11@11 1/2c. The New York market seems to be in better shape this week than last, although values have not been advanced. It is an easier market to sell in, however, and slight defects in stock are not discounted so heavily. The outlook for the trade seems favorable, as the demand is active and regular, and absorbs receipts quite readily. Quotations in that market on Thursday were as follows: Creamery, western, extras, per lb. 15c; do, firsts, 15@18c; do, thirds to seconds, 15@17c; do, State, finest, 18@19c; do, seconds to firsts, 15@18c; State dairy, half-cream tubs, fancy, 18c; do, Welsh tubs, finest, 17@17 1/2c; dairy tubs, seconds to firsts, 14@16 1/2c; imitation creamery, extras, 16@17c; do, seconds to firsts, 14@15 1/2c; factory, extras, 14@15c; do, seconds to firsts, 13 1/2@14 1/2c; do,

low grades, 12@13c; rolls, choice, 14 1/2c; do, poor to prime, 12@13 1/2c. Old butter—Creamery, extras, summer make, finest, 17c; do, common to prime, 14@16c; State dairy, tubs or firkins, finest, 16@17c; do, poor to prime, 13@16c; western factory, 12@14c.

At Elgin sales are reported at 18 1/2c per lb for best creamery.

DETROIT PRODUCE MARKET.

Detroit, March 24, 1895.

FLOUR.—Quotations on jobbers' lots in barrels are as follows:

Straights.....	\$4.75
Clear.....	4.50
Patent Michigan.....	3.25
Low Grade.....	3.25
Rye.....	3.25
Buckwheat.....	3.75
Granulated Corn Meal.....	2.00

CORN.—The visible supply of this grain on Saturday last in the United States and Canada was 43,388,000 bu., as compared with 42,644,000 bu. the previous week and 26,077,000 bu. at the corresponding date in 1897. Quotations in this market are as follows: No 2, 30c; No 3, 29 1/2c; No 2 yellow, 30 1/2c; No 3 yellow, 30 1/2c. Market quiet.

OATS.—The visible supply of this grain in the United States and Canada on Saturday last was 12,304,000 bu., as compared with 12,854,000 bu. the previous week, and 13,797,000 bu. at the corresponding date in 1897. Quotations are as follows: No 2 white, 30 1/2c; No 3 white, 30 1/2c. Market firm.

RYE.—The visible supply of this grain in the United States and Canada on Saturday last was 3,291,000 bu., as compared with 3,409,000 bu. the previous week, and 3,648,000 bu. at the corresponding date in 1897. No 2 quoted at 52c per bu. and quiet.

BARLEY.—Quoted at 80@85c per cwt for State. Very little offering.

FEED.—Jobbing quotations on carload lots are as follows: Bran and coarse middlings, \$14; fine middlings, \$15; cracked corn, \$14; coarse corn meal, \$13; corn and oat crop, \$12 per ton.

CLOVER SEED.—Prime spot quoted at \$2.85 per bu; No 2, \$2.65@2.70; alsike, \$3.25@4.00. Sales of buckthorn at \$2.60.

BUTTER.—The market is steady and unchanged. Receipts are quite large, but the bulk is only of ordinary quality. Quotations are as follows: Creamery, 18@20c; fancy dairy, 16@17c; good dairy, 13@15c; low grades, 8@10c per lb.

CHEESE.—Quoted at 10@10 1/2c for full cream. Market dull and weak.

EGGS.—From store quoted at 9c; from wagons, strictly fresh, 9 1/2@10c per doz.

POULTRY.—Market firm at following quotations: Dressed turkeys, 11@12c; dressed chickens, 8@8 1/2c; dressed ducks, 8@9c; dressed geese, 8@8 1/2c per lb. Live poultry 10@12c per lb less.

TALLOW.—Quoted at 3 1/4@3 1/2c per lb.

CABBAGE.—Selling from wagons at 12@15c per doz, or \$1.30 per hundred.

DRIED FRUITS.—Evaporated apples, 8 1/2@9c; evaporated peaches, 10@12c; dried apples, 4 1/2@5c per lb.

APPLES.—Quoted as follows: Fair, \$2.75 @3.00 per bbl; good, \$3.25@3.50; choice, \$3.75 @4.00.

HONEY.—Quoted at 10@13c per lb for ordinary to best.

BEANS.—Market has declined. Now quoted at 85@88c per bu for city hand-picked.

POTATOES.—Quoted at 65@70c per bu in car lots, and 70@75c from store. At Chicago common to choice are quoted at 58@67c per bu. On the markets, in small lots, they are selling at 65@70c per bu.

ONIONS.—Market dull and lower; sales are being made at 65@70c per bu for Michigan.

HIDES.—There has been a general decline in hides. Latest quotations are as follows: No 1 green, 8c; No 2 green, 7c; No 1 cured, 9c; No 2 cured, 8c; No 1 green calf, 10c; No 2 calf, 9 1/2c; No 1 kip, 9c; No 2 kip, 7 1/2c; sheepskins, as to wool, 90c@1.25; shearlings, 12@20c.

PROVISIONS.—Smoked hams are lower. No other changes. Quotations are as follows: Mess pork, \$10.75 per bbl; short cut mess, \$11; short clear, \$10.75; compound lard, 4 1/2c; family lard, 5 1/2c; kettle lard, 6 1/2c; smoked hams, 8 1/2@9c; bacon, 8 1/2@9c; shoulders, 5 1/2c; picnic hams, 6c; extra mess beef, \$8.50; plate beef, \$9.25.

OILS.—No change in oils; turpentine has declined. Latest quotations are as follows: Raw linseed, 42c; boiled linseed, 44c per gal, less 1c for cash in ten days; extra lard oil, 48c; No 1 lard oil, 35c; water white kerosene, 8 1/2c; fancy grade, 11 1/2c; deodorized stove gasoline, 7 1/2c; turpentine, 35 1/2c per gal in bbl lots.

HARDWARE.—Wire nails and barbed wire have declined. No other changes. Quotations are as follows: Wire nails, \$1.65; steel cut nails, \$1.60 per cwt, new card; axes, single bit, bronze, \$5; double bit, bronze, \$8.50; single bit, solid steel, \$6; double bit, solid steel, \$9.50 per doz; bar iron, \$1.40; carriage bolts, 75 per cent off list; tire bolts, 70 and 10 per cent off list; painted barbed wire, \$1.70; galvanized do, \$2 per cwt; single and double strength glass, 85 and 75 per cent off new list; sheet iron, No 24, \$2.50 per cwt; galvanized, 75 and 10 per cent off list; No 9 annealed wire, \$1.50 rates.

DETROIT LIVE STOCK MARKET.

Michigan Central Stock Yards.

Thursday, March 24, 1895.

CATTLE.

Receipts Thursday, 490; through, 28; on sale, 462, as compared with 166 one week ago. The quality averaged about the same. Market active, all sold early at strong last week's prices. \$4.50 was top price to-day for 6 choice butcher steers av 1,050 lbs, and \$4.20 for 24 good steers av 1,110 lbs, but the bulk changed hands at prices ranging from \$3.25 to \$4.15; old to good fat cows, \$2.25 to \$3.60; bulls, fair to good butchers, \$3.00 to \$3.50; feeders and stockers, \$3.50 to \$4.10. Veal Calves—Receipts, 147; one week ago, 63; active but 20 to 25c lower; a few choice brought \$5.80, bulk at \$5.00 to \$5.50 per 100 lbs. Milch cows and springers active at prices ranging from \$30.00 to \$45.00 each.

Sweet & N. sold Sullivan 11 steers av 960 at \$4.00, 6 do to Caplis & Co, av 755 at \$4.00 and a cow weighing 1,000 at \$3.50.

Taggart sold Sullivan a steer weighing 1,190 at \$4.00; a fat cow weighing 1,080 at \$3.50, 3 stockers av 686 at \$3.75 and 8 heifers to Black av 77 at \$3.75.

Overmuth sold Kammern a bull weighing 980 at \$3.50, 5 steers to Caplis & Co av 988 at \$4.15 and 1 do weighing 730 at \$4.15.

Clark sold Sullivan 9 steers and heifers av 983 at \$3.95.

Sebering & P sold same 9 steers av \$33 at \$4.00 and 3 do to Black av 1,140 at \$4.25.

Robb sold Black 3 heifers av \$10 at \$4.00 and 5 steers to Sullivan av \$72 at \$4.00.

Ansty sold Caplis & Co 5 steers av 625 at \$3.80 and a bull weighing 1,070 at \$3.25.

McMullen sold same 5 mixed butchers av 966 at \$3.60.

Beadle sold Schleicher 4 mixed butchers av 662 at \$3.55.

Weitzel sold Caplis & Co 4 mixed butchers av 962 at \$3.50 and a cow weighing 1,090 at \$3.25.

Spicer & M sold Mich Beef Co 24 steers av 1,110 at \$4.20 and a bull weighing 730 at \$3.20.

Lomason sold McIntyre a bull weighing 1,340 at \$3.45.

Adams sold Caplis & Co 12 steers and heifers av 916 at \$3.90 and a cow weighing 1,210 at \$3.25.

Bergen & T sold Regan 2 bulls av 920 at \$3 and 2 stockers to Sullivan av 390 at \$3.50.

Gulley sold Mich Beef Co 10 steers and heifers av 790 at \$3.90.

Belhimer sold Black 3 fat cows av 980 at \$3.50 and 2 heifers av 740 at \$3.75, 10 steers to Sullivan av 577 at \$3.90 and 3 do av 760 at \$3.90.

Townsend & H sold Fitzpatrick 27 good butcher steers av 923 at \$4.10 and 2 cows av 1,256 at \$3.25.

Burden sold Caplis & Co 4 steers and heifers av 1,010 at \$4.15 and 3 mixed butchers av 846 at \$3.45.

Ackley sold Sullivan 4 steers av 1,030 at \$4.15, 7 mixed butchers to Black av 854 at \$3.75 and a heifer weighing 970 at \$4.15.

Ed Clark sold Cook & Fry 25 steers av 912 at \$4.10.

Mayer sold Black 5 mixed butchers av 920 at \$3.25.

Roe & Holmes sold Robinson 5 mixed butchers av 1,014 at \$3.00, 14 steers and heifers av 840 at \$4.00, 14 do av 792 at \$4.10, 4 mixed butchers av 945 at \$3.25, 3 steers av 940 at \$4.15, a cow weighing 830 at \$2.50, 1 do weighing 1,540 at \$3.40, 1 do weighing 1,220 at \$3.50, 3 do av 1,086 at \$3.25 and a steer weighing 940 at \$4.15; 9 mixed butchers to Mich Beef Co av 992 at \$3.50, 6 choice butcher steers av 1,050 at \$4.50 and 4 cows av 1,000 at \$3.00; 5 mixed butchers to Kammern av 950 at \$3.00, 2 do av 950 at \$3.25 and 4 do av 632 at \$3.40; 11 feeders to Sullivan av 884 at \$3.90, 3 stockers av 533 at \$3.65, a bull weighing 1,680 at \$3.50 and 2 oxen av 1,860 at \$4.00; also 6 heifers to Mich Beef Co weighing 1,060 at \$4.25.

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ROE & HOLMES SOLD ROBINSON 5

stronger, especially for good light stockers and yearlings. Top steers were quoted at \$5.10@5.35; good butchers' steers, light to medium weights, \$4.15@4.60; cows, \$2.40; heifers, \$3.40@4.50; bulls, \$2.50@4.10; oxen, \$2.25@4.00; stock steers, \$3.55@4.35. The supply of prime fat heavy cattle, suitable for export, was very light, and they were very firm. Since Monday there has been little doing in the market, and values have held about steady. The outlook for the coming week is regarded as favorable. Quotations at the close on Wednesday were as follows: Export and Shipping Steers.—Prime to extra choice finished steers, 1,400 to 1,450 lbs., \$5.10@5.35; prime to choice steers, 1,300 to 1,400 lbs., \$4.85@5.05; good to choice fat steers, 1,200 to 1,400 lbs., \$4.60@4.75; good to choice fat smooth steers, 1,100 to 1,200 lbs., \$4.30@4.50; green coarse and rough fat steers, 1,050 to 1,400 lbs., \$3.75@4.25. Butchers Native Cattle.—Fat smooth dry fed steers, 1,050 to 1,150 lbs., \$4.40@4.60; fat smooth dry fed light steers, 900 to 1,000 lbs., \$4.15@4.35; green steers thin to half fattened, 1,000 to 1,300 lbs., \$3.65@4.10; fair to good steers, 900 to 1,000 lbs., \$3.90@4.25; choice smooth fat heifers, \$4.25@4.50; fair to good fat heifers, \$3.75@4.15; light thin half-fat heifers, \$3.40@3.65; fair to good mixed butchers' stock, \$3.75@4.10; mixed lots, fair to good quality fat cows and heifers, \$3.50@3.75; good smooth well fattened butcher cows, \$3.60@4.10; fair to good butcher cows, \$3.30@3.50. Native Stockers, Feeders, Bulls and Oxen.—Feeding steers, good style, weight and extra quality, \$4.20@4.35; feeding steers, common to only fair quality, \$3.85@4.10; good quality yearling stock steers, \$4.25@4.40; stock heifers, common to choice, \$3.50@3.80; stock steers, cull grades and throw outs, \$3.65@3.90; export weight bulls, fat and smooth, \$4.10@4.30; good fat smooth butchers' bulls, \$3.75@4.10; fair to good sausage bulls, \$3.40@3.65; thin old and common bulls, \$3.30@3.50; stock bulls, \$2.50@3.15; fat smooth young oxen to good lots fit for export, \$4.25@4.50; fair to fairly good partly fattened young oxen, \$3.50@4.15; old common and poor oxen, \$2.25@3.40. Thursday's receipts were estimated at 9,300; market steady at Wednesday's range of prices.

Sheep and Lambs.—Receipts Monday, were 11,600, as compared with 9,300 the previous Monday; shipments were 8,600 as compared with 6,600 for the same day the previous week. The quality of the offering was a good average. Values were full strong to a nickel higher on choice lambs, and 50¢ to 10¢ for strictly choice handy weight sheep and wethers. The best native lambs sold at \$5.90@5.95 generally, a few lots of prime lambs to fill late orders and close selected, fancy lambs, bringing \$6, while a load of prime, handy weights, weighing around 75 pounds, sorted to several buyers, brought \$6.05, while the tops of the Western fed lambs sold at \$5.90 generally, fair to good lambs selling at \$5.70@5.85. Exporters paid up to \$5.65@5.75 for choice heavy lambs. In sheep a lot of choice wethers with a few yearlings included, sold \$5; good to choice handy wethers sold at \$4.75@4.90; good to best mixed sheep, \$4.00@4.30; fair to good, mixed sheep, \$3.40@4.50; culls and common sheep, \$3.25@3.90. Yearlings were in light supply, and largely went in with the choice sheep, a few sorts selling at \$5.65@5.75. The market closed up firm, with pens pretty well cleared. Since Monday the market has been active and higher on both sheep and lambs, the latter showing the greatest advance. Quotations at the close on Wednesday were as follows: Native Lambs.—Choice to fancy native lambs, 75 to 85 lbs., \$6.00@6.15; fair to good native lambs, \$5.75@6.15; heavy lambs averaging from 110 down to 95 lbs., \$5.50@5.70; good cull and common lambs, \$5.25@5.50; common to fair cull lambs, \$5.05@5.25; fair to choice feeding lambs, \$5.50@5.75; fresh clipped lambs as to weight and quality, \$4.50@5.05; good to choice western lambs, \$5.70@6. Yearlings.—Good to choice native handy yearling wethers, \$5.10@5.35; common to fairly good ewe and mixed yearlings, \$4.85@5. Native Sheep.—Prime to fancy wethers, \$4.90@5; good to fancy handy sheep, \$4.75@4.90; common to fair, \$4.50@4.70; culls and common, \$3.50@4.40; heavy export fed western sheep and wethers, \$4.40@4.65; heavy native wethers, 110 to 150 lbs., \$4.70@4.90. Thursday, with receipts of 15,000, the market ruled steady to strong at unchanged prices.

Hogs.—Receipts of hogs on Monday last were 23,300, as compared with 22,610 for the same day the previous week; and shipments were 20,900, as compared with 15,770 for the same day the previous week. The market opened dull and 2½¢ lower for all grades; but closed fairly steady, with the offerings all taken but some pigs, and light weights. Good to choice light mediums sold at \$4.17½@4.20; yorkers, \$4.10@4.12½; mixed packers, \$4.15@4.17½; good to prime heavy, \$4.17½@4.20; pigs, common to choice, \$3.30@3.85. The run of pigs and lights continues much in excess of the demand, and has a bad effect upon the market. Since Monday there has been a slight drop in prices, generally on medium weights and pigs, while prime yorkers and heavy hogs have held firm, with an active demand. Quotations at the close on Wednesday were as follows: Good to choice light medium grades, 165 to 190 lbs., \$4.12½@4.15; choice and selected yorkers, 140 to 160 lbs., \$4.05@4.10; light yorkers and pigs mixed, \$4.04@4.05; mixed packing grades, 180 to 200 lbs., \$4.10@4.15; fair to best medium weight, 210 to 260 lbs., \$4.15@4.17½; good to prime heavy hogs of 270 to 300 lbs., \$4.17½@4.20; roughs, common to good, \$3.60@3.75; stags, common to good, \$2.75@3; pigs 110 to 120 lbs, good to prime corn fed lots, \$3.75@3.90; pigs, thin to fair light weights, 75 to 100 lbs., \$3.60@3.70; pigs, skips and common light and undesirable lots, \$3.30@3.50. Thursday's receipts estimated at 23,000; market active, but prices 5¢ lower; light, \$3.70@3.90; mixed, \$3.75@3.95; heavy, \$3.75@4; rough, \$3.75@3.80.

CHICAGO.

Union Stock Yards, March 24, 1898.

Cattle.—Receipts for last week were 48,525 head, as compared with 46,040 the previous week and 41,005 for the corresponding week in 1897. Monday the market opened active with a good demand from exporters and shippers as well as the home trade. The fat native steers sold higher than last week, anywhere from 10¢ to 15¢, but good branded steers failed to sell any better, and that was the case with the plain and ordinary native steers. All kinds of cow stock in good demand;

steady to strong. The best price paid for native steers was \$5.20 and \$5.30. Several lots of good branded steers sold between \$4.75@5.10; canning cows sold up to \$3.20; fat cows and heifers, \$3.80@4.25, with some choice heifers at \$4.45. Stockers were in light supply, and the few offered sold as high as last week. Good veal calves sold up to \$6.60. Up to and including Wednesday of this week receipts have been 32,430, as compared with 34,400 for the same days last week. Wednesday the market was fairly active, although heavy coarse cattle were slow and lower. We note a sale of a lot of prime Shorthorns and Herefords, av. 1,400 lbs., at \$5.75, the top price of the week. They were young, solid, chunky cattle, low on the legs, with broad level backs. Prime light steers were firm at steady prices. Feeders and stockers, and good yearlings were in good demand and firm. Good extra steers sold within a range of \$5.05@5.75; plain, dressed beef steers and export stock sold within a range of \$4.45@4.90. Canners and fat cows, \$2.90@3.05; prime fat heifers, \$3.75@4.30; stockers and yearlings, up to \$4.50@4.75; feeders, \$4.60@4.75; veal calves, \$5.75@6.50.

Thursday, market steady and unchanged. Sheep and Lambs.—Receipts last week were 76,941, as compared with 74,635 for the previous week, and 67,062 for the corresponding week in 1897. The market opened with only 15,000 on sale, as compared with 26,316 for the same day last week. Business opened active and prices rather higher, in some cases 10¢ higher on both sheep and lambs. A few fat ewes and mixed lots of ewes and wethers sold up to \$4.50; the great bulk of the good wethers at \$4.55@4.65, a few at \$4.75; small lots of yearlings sold at \$4.75@4.85. The ordinary run of good lambs sold around \$5.40; top Colorados at \$5.60; a deck or two of light feeding lambs sold at \$5.10, and four little spring lambs, the first for the year, brought \$7. Up to and including Wednesday receipts this week have been 50,092, as compared with 56,965 for the same days last week. Wednesday's business was active, with prices generally 10¢ higher on both sheep and lambs than the previous days, or about even with Monday. A few clipped ewes sold at \$4.10; prime clipped ewes at \$4.40; mutton sheep sold at a range of \$4.50@4.75; yearlings at \$4.80@5; an extra lot of prime clipped lambs sold at \$4.65 (equal to \$5.60@5.65 in fleece). The best Colorado lambs sold at \$5.60@5.65, and one small lot of natives at \$5.75; ordinary and common lots of natives, \$5.25@5.50; feeding lambs, \$5.25@5.30. A few spring lambs sold at \$7.

Thursday, the market held steady to firm at unchanged prices. Hogs.—Receipts last week were 128,602, as compared with 130,311 the previous week, and 122,933 for the corresponding date in 1897. Offerings on Monday were about the same as on Monday of last week. Business opened active, with prices about 5¢ higher on good mixed, say from 300 lbs average down to 200; on the 300@400-lb average prices ruled only steady, yet more sold for \$4 than any day last week, but only one lot as high as \$4.06. Rough and common packers sold at \$3.80@3.85; prime packers and good mixed, \$3.95@3.97½; with a butcher weight top at \$4; prime medium butchers' weight and shippers, \$3.95@4; light sorts, \$3.85@4; pigs, \$3.40. Up to and including Wednesday of this week receipts have been 77,780, as compared with \$2,267 for the same days last week. On Wednesday the demand was strong and active, but values were irregular and uneven. Trade, however, was active all day. Rough packers sold at \$3.80@3.85; prime packers and good mixed, \$3.92½@3.95; prime mediums, butcher weights, and shippers, \$3.95@4.02½, a load or so at \$4.05. Light sorts, \$3.90@3.97½, largely \$3.95. Light pigs under 100-lb average, \$3.60; over 100 lbs., \$3.85@3.90.

Thursday the market held steady, and prices ranged about the same as on Wednesday.

Veterinary Department.

CONDUCTED BY DR. W. C. FAIR.

Advice through this department is free to our subscribers. Each communication should state history and synopsis of the case fully; also name and address of the writer. The initials will only be given. When an answer is requested by mail it becomes private property, and a fee of one dollar must accompany the letter.

Abscess.—A pig has a bunch growing on side of chop, large as a good-sized bowl. W. P. H., Albion, Mich.—Apply tincture iodine once a day; if it does not absorb and go away open it.

Roarer.—Horse had distemper, and I thought I had him cured. Cough left him, but he makes a whistling sound in breathing. F. C. C., Crosswell, Mich.—Blister throat with caustic balsam once a week.

Rheumatism.—Horse is lame by spells. Cords on the stifle-joint seem to relax at times. J. P. H., Okemos, Mich.—Blister stifle with caustic balsam, and give thirty grains salol three times a day.

Worms.—Sheep lies down and acts dumpy. Will move about only when I drive her. L. H. S., Aurelius, Mich.—Give five grains santonin, one dram powdered area nut, and two ounces castor oil once a day.

Chronic Garget.—Cow calved Dec. 10. Since that time she has given lumpy milk. M. C. B., Sethton, Mich.—Use a milking tube. Apply tincture of iodine to udder once every two days. Foment udder with hot water.

Mange.—Mare is troubled with some sort of skin disease, scratching, biting, and rubbing herself. She eats well and is not lousy. T. H. H., Ypsilanti, Mich.—Apply one part Zenoletum to thirty parts water two or three times a week.

Torpid Kidneys.—Horse troubled for eighteen months with urinary difficulty; is continually trying to urinate when in stable. D. C. A. Ducklake, Mich.—Give one dram powdered nitrate potash and one dram fluid extract buchu in feed twice a day.

Indigestion.—Cow does not chew her cud; am feeding cornstalks. Cow does not seem sick. W. L. Bentley, Mich.—Give her one pound epsom salts once a day until her bowels act freely. Give one

ounce bicarbonate soda, one ounce powdered charcoal in feed twice a day. Change her feed.

Loss of Appetite.—My horses do not eat well; they have good life, but no appetite. J. H. L., Williamston, Mich.—Give half an ounce ground gentian three times a day after each feed. Change feed. A few apples, potatoes, carrots, or turnips will do them good.

Indigestion.—Sheep have no appetite, and will hardly move. I find some ticks on them. I think they have wool in the intestines. E. K., Henderson, Mich.—Give one ounce epsom salts and half a grain phenylin twice a day until bowels move freely. Follow with one dram tincture gentian three times a day.

Wolf Teeth.—Worms.—Colt coming four years old is not doing well. Has wolf teeth. Are they injurious, and should they be removed? J. S., East Tawas, Mich.—Have wolf teeth extracted; they seldom do much harm, but they do no good. Give one dram sulphate of iron in feed three times a day.

Stringhalt.—Three-year-old filly acts as though she was in pain; draws hind legs up to belly when made to stand over in the stable; raises feet high up. I am fearful she may have stringhalt. When being driven she acts the same as other horses. T. D., Sears, Mich.—Your filly has stringhalt. Give one dram ground nuxvomica in feed twice a day.

Enlarged Fetlock Joint.—Windgalls.—Mare has a thickening on the inside of her right forward ankle. I had been trying to thin it with iodine when, through the advice of a veterinary it was blistered, about seven months ago, and has never been as well since, being quite thick now. Have been trying different preparations of iodine without much benefit. What is the best remedy for windgalls? Would you advise having them opened? H. B., Horton, Mich.—If windgalls are small do not open them. Blisters will reduce them. The thickening on your mare's leg cannot be removed.

Will a Twin Heifer Breed—Rheumatism.—A cow dropped twin calves, one a male, the other a female. Will the heifer breed? I have been told she will not. This cow got along nicely until the seventh day. She milked all right in the morning before breakfast, but in less than an hour she would not eat anything, and one-quarter of her udder was badly swollen and very tender. The milk is nearly dried up in this quarter, and the swelling is spreading to other quarters. I have another cow that went very lame two days after calving; both hind legs swelled badly. A. L. S., Maple Rapids, Mich.—Yes, a twin heifer will breed, but they are not sure breeders. Foment udder with hot water. Give her Epsom salts to purge her. Give rheumatic cow two drams salicylate soda three times a day. Keep her bowels open and apply equal parts spirits camphor and alcohol to legs twice a day.

Acute Indigestion.—Heifer dropped calf when 13 months old; gave milk four months; fed on good, well cured hay. Fed no grain; watered from well in constant use. She was giving eight quarts of milk per day; had been in yard in afternoon with other cows. At night gave one quart and after that about one gill at a milking. Udder loose and flabby. No other symptoms of disease; ate and drank as usual, and in all respects appeared well. Also my neighbor had a cow which suddenly went dry in much the same way. C. H. D., Litchfield, Mich.—Your cow suffered from acute indigestion. An active saline cathartic should have been given and it would have relieved her. Change feed. I doubt very much whether she will give as much milk again until she comes fresh again. However, if you hit upon the right method of feeding she will improve.

Used Four Bottles With Satisfaction.

Toronto, Jeff. Co., Ohio, May 3, 1894. The Lawrence-Williams Co., Cleveland, O. My horses have been sick this winter and I have used four bottles of Gombault's Caustic Balsam with the greatest satisfaction. They swell under the belly and on chest and throat, and every time I rub them with the Caustic Balsam it would swell and water would drop from the same, and I believe my horses would have died had it not been for that medicine. DANIEL COLLINS.



WHAT

part of a wagon wears out first? The wheels, of course. Why not buy wheels that can't wear out? When a man buys the

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Horticultural.

RED RASPBERRIES.

BY CHARLES C. NASH.

(Continued From Last Issue.)
GROWING AND DIGGING THE PLANTS.

It is a great mistake to dig plants out of the rows where it is expected to grow fruit. I have come to the conclusion after due observation that it will ruin a patch of red raspberries for fruiting, as the feeding roots which carry the plant food and moisture to the fruiting hills are severed from it when the plants are dug.

One of the most beautiful blocks of red caps I ever saw was entirely ruined by this practice and was plowed up and a crop of grain sowed in its place. It would be about as good sense to prune or cut off the feeding roots of corn hills say six to twelve inches from the hills and then expect a good crop of corn.

Hence, I prefer to have a separate block from which to dig the plants. A good way is to set plants for this purpose three feet apart each way, cultivate and hoe well the first season and during the fall or winter scatter fresh barnyard manure among the hills about one-half to one inch thick, and the next summer you will have an abundance of plants on a small area of ground.

I used to dig the plants with spade and mattock, but after considerable experimenting the last season I struck onto a much better plan. I start a team and plow around the block of plants and after the first furrow is turned we take five and six-tined D-handle dung forks and fork all the plants out; then treat the next furrow in the same way, until all the plants desired are forked out. One man, or boy, gathers up the plants as they are thrown out with a fork, or if he is spry he can count them and lay down in bundles of 13, and these doubled will make a bundle of 26 for 25, if it is wished to ship them, if not, they can be kept heeled in as fast as gathered up.

GOOD AND POOR PLANTS.

Fig. 1 represents a good sucker plant which cannot be easily obtained with the proper length of root by digging with the spade or mattock, but by the plowing method, as described under "Digging the Plants."



FIG. 1.

Fig. 2 will pass if well set, but if plenty of better plants are to be had I would throw it away, as not all of them will be sure to grow, and I would not call this kind of a plant first-class.

Fig. 3 shows plants that are only fit to be thrown on the brush heap, and no honest nurseryman will sell them.

Fig. 4 shows a plant that is superior to all the others. It has more fibrous roots, which spread out in the direction desired and is sure to grow if planted with proper care. I term it a "severed root;" it can be grown by taking a common spade, file with a cross-cut file until very sharp, thrust it into the soil in such a manner as to cut or sever it from the parent hill by leaving about four to six inches of root on each side of the shoot of the new plant. If this is done when the plants are eight to ten inches high, by fall they will make very desirable plants.

I would not set a poor plant unless I could not obtain good ones.

I look at it in this light: The root of a tree or plant is the foundation, as it were, upon which future success in fruit-bearing depends. Not only is it, but there is much pleasure in doing our work thoroughly.

CULTIVATION AND HOEING.

With a fine-toothed one-horse cultivator, having an adjustable wheel, I prefer to cultivate only one inch deep, stirring the entire surface close up to the row and finishing from one-half to an inch deep around and between the hills with the hoe, which should be kept sharp.

If this cultivating and hoeing is kept up once each week from the time the soil is in proper condition in the spring until the latter part of July, the fine "dust mulch" will serve as a sort of

blanket to prevent evaporation and retain moisture during a drouth. This dust mulch is of special value during the picking season and the most successful growers run the cultivator over the surface between the rows after every picking during the picking season.

During a severe drouth this has proved to be one of the most economical as well as practical methods of carrying a crop of berries over successfully.

Someone will say why be so radical on the subject of cultivation and hoeing? To such persons I would say, try it on a small scale and you will become satisfied that there is where the secret

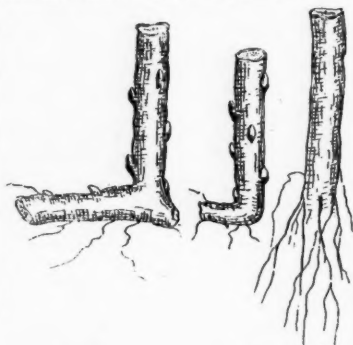


FIG. 2.

FIG. 3.

of success comes in. There is a real pleasure in taking care of fruits in this manner that the careless man never has the privilege of enjoying. Not only the pleasure and satisfaction, but the profit comes in by this method.

"What a man sows that shall he also reap." But in raspberry culture the quality, size and appearance depend mostly on the care given after planting time.

I would caution against cultivating while the blossoms are forming, but after the fruit is set keep it going.

KEEPING DOWN THE SUCKERS.

I have known persons letting the green sprouts get most of their growth, then taking a scythe and cutting them off between the rows. I doubt if one-third of a crop can be raised by this kind of management, and the berries will not be more than one-half as salable. The stubs left after cutting off make it unpleasant for the pickers to step among. They cannot pick nearly as many quarts, thus making it necessary to give them one-half to one cent more per quart, and on the whole the man who grows fruit by this "go-as-you-can" method is the one who can always have the pleasure of always being in debt.

The proper way to keep the suckers down is to take a common steel hoe, file one to one and a half inches off the lower edge, or crease with the file and place in the vice and break off, after which file a sharp bevel on the inner edge, then go over the plants each week as they are cultivated and hoe off every sucker in sight.

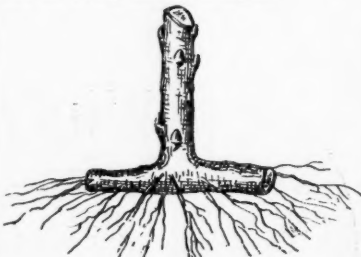


FIG. 4.

You may say this seems like unnecessary labor to hoe the sprouts off each week. Well, here is where you are getting the profit—the next and the present crop. All the vitality goes to the parent hill to make strong, vigorous canes and fruit buds for the next season. Some may say I can't make red raspberries profitable. Here is often the neglect which causes failure. If cut off often they can be disposed of with ease and rapidity and, being tender, the cultivator breaks many off that will save considerable labor in hoeing.

For The Michigan Farmer.
THE GARDEN.

With the approach of spring comes the annual flood of seed catalogues. Some of them are excellent specimens of the printer's art, while others have little to recommend them. Of course, a company is not always judged by its catalogue, any more than a man by his clothes, but we usually expect that a firm which is careful and painstaking with the seeds it sends out will not make its announcements to the public in a slovenly or unattractive manner.

A catalogue may not be large or expensive, but its neatness and general make-up should be an index to the nature of the company sending it out, and we believe that it usually is. There are some flashily colored, badly printed monstrosities that we prefer to keep clear of, no matter what exaggerated claims they make.

The catalogue serves a good purpose, and that it what it is for. Every year it comes to renew the interest in the garden. If we are not induced to try any of the new varieties we at least pay better attention to the old. But there is nearly always something which we will do well to try. It will bring us a fresh stock of seed, if nothing more, and we frequently get a variety that compensates for all the

failures. An occasional spare evening may be profitably spent in looking over the seed catalogues.

While the catalogues are looking upon the bright side of the garden question there is another class which is doing the opposite. Certain journals, which run a so-called "farm department," as well as some agricultural papers, now take a hand at telling the farmers that they have no gardens, that they are worse than the heathen because they have not, and more of a like nature. In an excellent work on gardening we find these words: "So we have the astonishing and deplorable fact that a majority of American farmers have no garden

(Continued on page 257.)

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AGENT**

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TREES As they live grow hungry for food and unless there is phosphorus in the ground, The leaves will grow yellow and curl. While the fruit will dwindle and die. Then fertilize your trees and the farm with PURE BASIC SLAG. It is cheap. **JACOB REESE,** 400 Chestnut Street, Philadelphia, Pa.

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When writing advertisers mention Mich. Farmer.

worthy to be called a 'family garden,' unless so named because it is entirely given into the care of the already over-worked farmer's wife and other members of the family, especially the half-grown boys, if they, in true appreciation of the good things to be had in compensation, consent to spend an extra working hour now and then in hoeing and pulling weeds." "Fried pork, fried potatoes, poor bread from poorly ground flour, lard pies, and rich cakes—these, with hardly a variation, are the chief articles of food for thousands of farmer families." Must we believe all this? We have not found it so in Michigan. There may be an occasional farm without a garden, but we have never found one, so far as we can recall. Are the conditions so bad in other states? We do not believe it. Such statements sound too much like the essays on political economy written by scholars who view the world through a library window and then tell us just how it should be run. There may have been a time when things were as bad as here represented, though we are loth to believe it. More likely some one half a century ago reported the conditions existing in some isolated locality, and this has been repeated year in and year out by writers who have never taken the trouble to investigate for themselves. We have too good an opinion of the pioneers to believe that as a class they were so indifferent to the welfare of the family as this would indicate. At the present time we find the garden an important factor in farm life, wherever we go. Such statements are, we believe, true of too small a proportion of farmers to admit of the general application which they are commonly given. It is time this was stopped. Farmers buy seeds, as is evident from the scores of seed companies in existence, and they certainly do not buy them to throw away.

Experiments have shown that there is considerable difference in the length of time different kinds of seeds will retain their vitality. Cucumbers and endive are said to be good after ten years, while onions, parsnips, and salsify are not to be depended upon after the second season. The majority of seeds may be kept four or five years. In some cases, however, seeds have been kept a much longer time and have still given satisfaction, but we do not like to trust them. The claim has been made that new seeds tend to produce foliage and old are better for fruit, but this is no longer considered of importance. It is not easy to see how the age of the seed can change the nature of the plant, except to become less potent as it gets older, for new seeds germinate more quickly than old. Much depends upon the condition of the seed when gathered and how it is kept. Here is where the seed company has the advantage over the individual. The seed can be gathered when most fit, and cured and stored in the proper manner. At the same time it depends upon the integrity of the company whether we really get new seeds or stock left over from previous years.

F. D. W.

DAMAGE TO CALIFORNIA FRUIT.

Telegraphic dispatches from San Francisco say that reports from all parts of that state indicate that heavy frosts, which prevailed for a few mornings last week, have done great damage to the more tender varieties of fruit. In many parts of the state the apricot crop will be almost a total failure. Nectarines and peaches have also suffered severely. Nearly all the fruit trees are in blossom or budding, and the cold weather came at a most inopportune time. Late varieties of fruit will make fair crops. Prunes, one of the staple products of California, have not been injured to any appreciable extent. Early corn and potatoes have been cut down, and in general the growing crop will be late. Early almonds will not produce more than one-third the usual yield, and while cherries have been considerably thinned, trees were in many places overloaded and the damage will not be excessive.

THROAT DISEASES commence with a Cough, Cold or Sore Throat. "Brown's Bronchial Troches" give immediate and sure relief.

SEEDS, PLANTS, TREES.—Where to procure these is of vital importance to every planter, as success or failure depends upon it. To produce the best results they must be of strong vitality, healthy and true to name. When you can be assured of these qualities and the most reasonable prices that such can be sold at, the purchaser should look no further. These qualities are all found at the Storrs & Harrison Company, Painesville, Ohio, who advertise in our columns. If you will send them your address on a postal they will send you their valuable catalogue free.

The Poultry Yard.

POULTRY—HOW TO RAISE, CARE FOR, AND MARKET.

(Paper read at the Branch County Institute, held at Coldwater, February 11, by Mrs. Nellie Reid, and published by request.)

The materials most needed to start with are, first, a genuine love for the business and a determination to succeed; second, an inexhaustible supply of patience, and a moderate supply of good common sense. Given these, and a few hens, you need not fear to make a start. If you hatch with hens, be sure before you place them in the coop that they are free from lice and mites, which you can do by placing both hen and chicks in a box which has been freely painted with carbolin, or some other good liquid lice killer, and cover them with a piece of old carpet, or anything handy, and let them remain twenty or thirty minutes. They will then be ready for the coop, which should be placed in a dry, sheltered spot. A shed open to the south is the best. Cold and damp are fruitful causes of loss to young chicks, and they will do much better if the coops are placed under a basement or shed, where the chicks can run out of doors during the day and come home to a warm, dry nest at night. Do not forget to keep them clean. The straw and chaff should be raked out and replaced with fresh at least three times a week, and fresh water kept always before them from the start. The feed best suited to their needs I have found to be millet, hay and clover seeds and rolled oats for the first few days, after which time I fed cake made of two parts cornmeal, one part graham flour, a handful of blood or meat meal, a handful of bone meal, a little salt and soda and a couple of tablespoonsful of charcoal. Thin up with sour milk or water, bake and crumb up dry. I tried dry feed last year and think it a great improvement. As they grew larger I fed cracked wheat and corn and all the milk I could spare. It is claimed by some that milk causes cholera, but I have always fed it, both sweet and sour, and have never had the cholera in my flock yet. If you are intending your chicks for broilers, they must be fed regularly every two hours all they will eat up clean. They must be kept growing just as fast as possible from the time they are out of the shell till they are ready for market, which should be in ten or twelve weeks' time, when they should weigh two pounds or more. They should not have a very large run, or they will exercise too much and will not dress plump and fat. The best authorities on the subject declare that the best breeds for broilers are the Barred and White Rocks and the Wyandottes. If you want your chicks for breeding purposes, or for market in the fall and winter, then they cannot have too much range, and feeding three or four times a day is sufficient. Brooder chicks are fed and handled the same as those under hens, except with much less trouble. The brooder must be kept clean and warm, the chicks be properly fed and have plenty of sand to work in. That is all the secret there is about it. It is lots of work, I will not deny that, and a person expecting to make anything out of poultry must attend strictly to business. You can't stuff them one day and go off visiting the next and leave them to shift for themselves, no more than you can milk your cows one day and let them go without milking the next, and expect to astonish the world with a great butter record.

We seldom get anything in this world without working for it, and poultry raising is no exception to the rule. Anyone thinking to easily reach a Klondike by the poultry route will soon find out their mistake. But, as in everything else, there is "always room at the top," and the best always commands a good price when common and poor go begging. I cannot give you any cast-iron rules, warranted to work, for everybody to raise chickens by. What will do for one will not always please somebody else. The best way is to take a good poultry paper and study it well. I will warrant you will read lots of things you never heard of before, and will find something that exactly hits your case and will benefit you enough to more than pay the price of the paper. It certainly will if the price does not exceed that of the Michigan Poultry Breeder, which offers a year's subscription free

to anyone interested in poultry who cannot raise thirty-five cents.

This brings us to the question of poultry for market. An almost insignificant number of farmers and farmers' wives have learned that it pays better to take to market fowls of a uniform color, size and grade. Nine out of ten of them are still hauling in annually loads of those distressed looking specimens of all shapes and sizes, with coats, like Joseph's, of many colors and bodies like nothing so much as a crow in a poor corn year. Now those chickens are as far behind the times as are the old native cattle behind the fine dairy and beef breeds of to-day. Such poultry will not bring a good price per pound, and their weight is almost nothing, so those people say, "Well, poultry don't pay anyway," and go home firmly resolved never to raise another chicken; but wife says she will have some chickens the next spring, so the old "speckled" hen and the old "yaller" hen and six or eight more are "set" and the next fall he is ready to bring in another load the exact counterpart of those he brought the year before, gets the same small price, says the same thing, and goes home and does the same thing over again. Now you watch the progressive farmer when he drives in with a load of Barred or White Rocks, Wyandottes, Brahmas or Cochins. This one does not have to hunt for a market. The buyers are all anxious to secure that extra nice load of chickens, and they have been known to bring two and three cents above the market price where the poor, unsightly stuff went from place to place hunting a buyer at bottom prices.

Chickens should be prepared for market the same as cattle or hogs. Who thinks of taking hogs to market so poor that their ribs look like a washboard? Why, nobody, of course; but there are plenty who sell chickens so poor that they have to lean against the fence to cackle. Now the proper way to fit them for market is to shut them up in close quarters and feed all they will eat up clean, three times a day, for four or five weeks. I feed one part bran and two of cornmeal, mixed up with boiling water, for the morning and noon feed, and whole corn at night. Fowls fattened in this way are clean, smooth and well cushioned with fat when dressed, and will gain enough in weight and bring enough more per pound to well pay for the extra trouble. Now, to illustrate the advantage of marketing good poultry instead of poor, I need only give you the following figures, which, it is said, "never lie." Fifty good, well fattened Plymouth Rocks or Brahmas, average weight eight pounds, will weigh 400 pounds; at seven cents per pound they will bring \$28. The scrub chicken in the condition they are generally brought to market will not weigh over four pounds; fifty will weigh 200 pounds, and at five cents per pound they will bring the magnificent sum of \$10. These figures are not "guess-work," but facts, and ought to convince the most skeptical that it pays to keep the best of poultry as well as the best of other stock.

(Concluded next week.)

POULTRY NOTES.

A lady reader of The Farmer sends the following inquiries: "I wish this spring to enclose about two acres with a fence that will keep turkeys in during laying and hatching season. Could some of the readers of The Farmer tell me the cheapest way it could be built. How high will it have to be to keep the turkeys in?"

Mrs. J. H., Oakland Co., writes: In answer to J. M. as to the "two-story henhouse," I would say we have had some experience in that line. Two years ago we built a two-story house, and found it all right in the summer, but when winter set in the fowls' combs were soon frozen off. Last fall we had it papered and sided over, and now it is a good warm house. If a person wishes two rooms, I would advise a two-story house. Hens will go up stairs after being driven up a few times.

An authority on turkeys says: The common black turkey is as good a general purpose turkey as any, with the possible exception of a cross of American Black with the Mammoth Bronze. Do not attempt to raise the cross of the wild turkey with the tame for it will only result in a half wild bird which can never be kept within proper bounds. Large fields for feeding by day and well ventilated houses near the fields for roosting by night are nec-

essary to make turkey raising profitable. It is essential that the house for the turkeys be near the field over which they feed, with no trees between, or the chances are they will roost in the trees instead of in the house. In the winter, house warmly and feed out of doors, scattering the grain thinly over the ground to make the turkeys take the necessary amount of exercise.

Common tarred paper was all right for your grandfathers to use as inside lining and outside covering of their buildings,—in fact, it was all they had to use; but in this age of advancement a fabric has been produced which appeals to every farmer, florist, or gardener.

It is known as the *Neponset Waterproof Red Rope Fabric*. It is a splendid roof and side covering for outbuildings, and takes the place of back plaster in dwellings. It is proof against wind, water, frost, and insures warm, dry buildings; costs only \$5.00 for 500 square feet at the factory, with the necessary nails and tin caps. Any man with a hammer and pocket knife can put it on.

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EGGS from Blue Andalusian exclusively. The handsomest fowl of the feathered class. Non setters. Send for dir. J. R. Steltz, Cudahy, Milwaukee, Wis.

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Farmers' Clubs.

CONDUCTED BY A. C. BIRD.

All correspondence for this Department should be addressed to A. C. Bird, Highland, Mich.

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All communications relating to the organization of new clubs should be addressed to C. M. Pierce, Elva, Mich.

Association question for April: The Present Rural School System—How Can it be Improved?

Association topic for May: Dairy and Food Laws and the Farmers' Relation Thereto.

THE RURAL SCHOOL PROBLEM.

The rural school question is ever with us. It is the unsolved problem of the age. May we venture the prediction that it will be the unsolved problem of the next age as well, and of the next, and the next. From its nature it must remain unsettled. As long as the world exists, so long will the education of its youth remain a subject of continuous debate. The educational problem in all its phases is simply infinite. We need not wonder that it remains unsolved, nor that the prospect often seems discouraging. Neither is it a source of alarm that the rural school is just at present the subject of particular ridicule by that highly interesting class of men known as the educationalists. It is simply the fashion of the period. The next decade will see some other phase of school work the butt of ridicule, and the rural school problem will have become a dead issue in the pedagogical world.

These well intentioned, philanthropically disposed professors of pedagogics, whose present hobby is the ridicule of the rural school and whose rank is just now determined by their ability to publicly deplore the mental surroundings of the average country youth, are really doing a grand work from an historical point of view, and the people appreciate it. But we think these good men are oftentimes mistaken in their conclusions regarding the work done in the past, and being accomplished now, by the rural schools. School work can best be judged by its matured product. While judged from a pedagogical standpoint the village and city schools simply outclass the rural schools, while with their theoretically perfect system, with their well oiled machinery, and with their multitudinous glittering appendages the village and city schools appeal strongly to the average teacher, yet is there a something about the rural school in all its simplicity which develops in its pupils a practicality rarely found in the product of any other school of equal grade; a practicality seldom lost in after life. Business men everywhere recognize this fact. Even educationalists themselves can not at all times successfully ignore it. What we consider the most important discovery from a practical point of view of the distinguished Committee of Twelve in their investigation of the rural school question is not even mentioned in their report. It is as follows: The committee, made up of the twelve most able pedagogical experts of the country, at its final session, in the city of Chicago, invited several of the eminent educationalists of the University of Chicago to counsel with them. In the midst of the deep and learned discussion, which was as with one voice deploring the sad condition of the rural schools, a somewhat irreverent member of the committee from one of the Western states greatly surprised his conferees with this practical question: "Gentlemen, will all of you who did not receive your early school training in the rural schools please to make it known by rising to your feet?" Not one arose. Of all that number of eminent educationalists, nearly all college professors or college presidents, every man was the product of the despised rural school.

We do not argue from this that effort should not be made to improve the rural schools. Indeed we would hail with joy every practical suggestion toward the betterment of these schools. In our judgment, however, any recommendation which involves the introduction of more elaborate machinery into either the general direction or the immediate supervision of our schools should be carefully considered before it is adopted. It should never be lost

sight of that the thing which gives to the rural schools their peculiar strength and character, is the fact that they are close to the people and under their direct control. Such popular control, although it has had and doubtless always will have its weaknesses, yet imparts a rugged practicality otherwise impossible to secure.

REPORTS FROM LOCAL CLUBS.

A NEW CLUB.

The second meeting of the Byron Farmers' Club was held with Mr. and Mrs. E. D. Wiltse on the 9th inst. Two new members were admitted. Constitution and by-laws were adopted. Three delegates were elected to meet at Corunna April 16th with other delegates from the several clubs of the county for the purpose of organizing a County Association. Pres. Boice, E. D. Wiltse and A. Orr were elected. A short time was pleasantly spent in looking over Mr. Wiltse's well kept stock and pleasant home and surroundings. Next meeting at the home of Mr. and Mrs. Boice, April 14th.

Shiawassee Co. JAMES GOFF, Cor. Sec.

NORTHEAST VENICE FARMERS' CLUB.

Mr. and Mrs. C. Shipman entertained the March club. Three delegates were elected to go to Corunna April 16th, to assist in the organization of a County Association. Twenty families were made the limit of membership in the club. "Overdone Hospitality" was presented by Mrs. Clavey. She said true hospitality consists in making your guest comfortable and happy, not to overload the table, and worry and fret and make excuses about the rooms, the dirt, and there being nothing fit to eat, thus making your guests wish they had remained at home.

"Care of Farm Horses" was discussed by all the club. Stable needs ventilation. Horses should have daily exercise. Better to work than remain idle. Don't water warm. Water before feeding grain. Don't break too young. Tie short rather than too long.

"Which is the best Educator, Travel or Books?" was discussed favorably to books. They are better suited to our limited leisure.

JAS. E. LAWCOCK, Cor. Sec.

Shiawassee Co.

ELKLAND AND GRANT FARMERS' CLUB.

Last meeting held March 10th at the home of Mrs. Ephraim Knight. The institute question was thoroughly discussed and resulted in the adoption of the following resolutions: That we the members of the Elkland and Grant Farmers' Club believe that the appropriation for farmers' institutes is money well expended, and that in our opinion it has been the means of doing a great deal of good to a great many of the farmers of Michigan. Had it not been for the appropriation we are fully satisfied there would not have been one institute meeting for every ten there has been held. It has also been the means of starting a number of farmers' clubs in different parts of the State. The management has been very satisfactory to us. The speakers supplied by the State have been good, sound, practical men and women, well able to express their ideas. We also believe that we have men and women in our county possessed of as much intelligence as the average county in this State, but still we favor getting good men from outside for the reason that we generally get some new ideas and they will draw larger crowds.

Next meeting with Fred Harrison April 21st.

Tuscola Co. ARCH. MARSHALL, Sec.

SOUTH JACKSON FARMERS' CLUB.

The February meeting was held at the home of Milton Reed on the 26th. The chief subject of discussion was "Stock Farming," opened by Mr. Reed. He compared stock with grain farming and could not say that one is better than the other. Stock farming is akin to speculation and, to make a success of it, one must have a natural liking for it. He has tried both and thinks they work well together, when often either alone might fail. A fusillade of questions assailed him that showed the club's interest in the subject and some items like the following were elicited: No profit in buying stock for fattening at present prices. He estimates three bushels of corn for winter per sheep. Twenty-five pounds is a very good gain. Failure of clover led him to stock raising. Within two weeks will draw out fertilizers. Prefers this season of year because labor and time are cheap. Doesn't expect to become a millionaire out of the business. Advises every farmer to raise all the stock he can and fat it himself. He will make more than to buy for feeding.

Mr. Edwards thinks profit in stock farming depends more upon econom-

ical feeding than any other one thing. He quoted Mr. Watkins at the Nowell Institute, who said: "I feed my sheep in the morning a light feed of hay, or straw if I can get it." That "if I can get it" caught his attention. Of course the straw cost him much less than the hay. Mr. E. feeds his animals no more than they will eat up clean and judges by their actions and appearance if it be enough. Above all things be kind—one scare will take off two feeds. There is profit in buying to feed if you feed economically.

Mr. Rhoades objected. There is more money in grain. A member objected to Mr. Rhoades and another member to the objection. A voice was heard quoting, "When doctors disagree," etc., and Mr. Crumb, a visitor, was called to the floor. His most fervent heartfelt wish is that a learned, scientific gentleman from Lansing, one of the type who writes those alluring, rose-colored articles for The Michigan Farmer and other agricultural journals, about sheep that gain twenty-five pounds in sixty days, corn that never yields less than one hundred bushels per acre, etc., etc., would settle down here in our midst and teach us how to do it. He is willing to learn, reads and listens faithfully and yet must sadly confess that he does not attain any of the startling results those journals often mention. To him farming is beginning to seem only a round of working all summer to raise food, and all winter to feed it out. He experiments in feeding but the results are so conflicting that he's all at sea. Would like to ask the aforementioned scientific gentleman what he does with the refuse left from his experiments? He stock decline to eat up everything and get fat at the same time.

Mrs. Raven read an excellent paper upon "How Shall the Apple be Divided Between Husband and Wife?" In the discussion that followed it was noticeable that those members who are in a state of single blessedness had more to say than the disciples of Hymen. And the reporter mildly wondered why.

The next meeting will be held at the home of the secretary, Friday, March 25. Robert Tygh will talk upon "Corn and its culture," and Mrs. Anna Kipp will have a paper upon "Who Works the Harder, the Husband or Wife?"

HELEN M. CARPENTER.

Jackson Co.

MAPLE RIVER FARMERS' CLUB.

February meeting held with Mrs. J. M. Moore on the 24th. Theron Gladden presented the topic "What is the prime object of this organization?" He said in part: Sociability among members and a fearless discussion of important public questions from a farmer's standpoint. The farmers' club can exert a favorable influence on the solution of the capital and labor problems. E. J. Cook: The best good to the best organized. We pay 70 per cent. of the taxes and cast 50 per cent. of the votes. We should work for equal taxation. J. J. Whelan: Inform ourselves on public questions, but avoid petty politics. Mr. Patchel: We should oppose class legislation in every form. Chas. Whelan: One of our prime objects is to understand thoroughly what we want and then work with that end in view.

F. E. Sheldon presented a valuable paper on "Hogs, Cattle, Sheep or Horses; Which Promises the Most to the Farmer in the Future?" Much depends on the farmer and his environment. Preference given in the order would be cattle, sheep, hogs and horses.

The formation of a County Association was discussed favorably and E. J. Cook was appointed to call a meeting of the presidents of the various clubs throughout the county. Next meeting March 31st, with Mr. and Mrs. F. E. Sheldon.

C. P. REYNOLDS, Cor. Sec.

Shiawassee Co.

MILLINGTON FARMERS' CLUB.

A very enjoyable meeting was held with Mr. and Mrs. A. Findley on March 10. A lively debate was held on the Association topic, which will be continued at the next meeting. The beet question was discussed. A majority thought the sugar beet the best and the "dead beet" the worst. Two new members joined. Time of meeting changed from the second Thursday to the second Tuesday of each month. Next meeting with Mr. and Mrs. John Ward, April 12th.

Tuscola Co. MRS. T. J. RICE, Sec.

SEVILLE AND SUMNER FARMERS' CLUB.

March meeting occurred the 3d inst. at the home of Mr. and Mrs. George Louick. President E. A. Potter read a communication from the American Sugar Growers' Association, asking for a protest from the club against the an-

nexation of the Hawaiian Islands. It was unanimously laid on the table. Resolutions were adopted endorsing the work of the Dairy and Food Commission; Postal Savings Banks; inspection of grain by a State Inspector; the continuation of the One-Day, the County Round-Up and the State Round-Up Institutes; the employment of a practical farmer as Superintendent of Institutes; that while recognizing the great benefit derived from the use of the State appropriation, yet not approving of further appropriations for such purposes; asking for justice to the farmers in legislation, and deploring the predominance of lawyers in law-making bodies; pledging active and earnest work to secure the selection of practical farmers for future legislators.

A paper by President Potter followed which this department would be very glad to publish in full did space permit. The following are the best thoughts: A deplorable agricultural depression has rested upon us, caused by overproduction. The great crops of cereals grown have been worth in the aggregate even less than the small crops of former years. These clouds, however, are lifting. While farmers' revenues have continually decreased, taxes have remained the same or increased. This should not be. Taxes should be equalized. Remedies suggested: 1st, Diversify our productions. 2d, Let the farmers give more attention to matters of legislation both in State and Nation. 3d, Permanently retire from legislative bodies representatives of corporations and trusts and place good substantial farmers and business men in their places. 4th, To do this effectively we must organize. Individually we can accomplish nothing; collectively, if united through our organization, nothing can withstand our power.

Gratiot Co. W. C. PUGSLEY, Cor. Sec.

BLISSFIELD FARMERS' CLUB.

Club met at the home of R. Payne, March 9th. "Mixed or Special Farming?" was announced for discussion. F. Knopf, in leading said mixed farming paid him best. Thought it advisable for every one to raise whatever he could succeed best with. F. Pratt believed in raising a little of everything. He always tried to have enough for himself and some to sell. Mr. Lawson makes something of a specialty of potatoes, but not to the exclusion of other things. Mr. Cogswell would eliminate oats as a crop too hard on the land to be profitable at present prices. Mr. Lathrop defended the crop. In his section they had to raise oats to reduce the land. Mr. Austin said, "Raise one crop and stick to it. You will succeed in the long run." Others thought mixed farming better because if one crop failed either in yield or price, something else would take its place. A vote of the club favored mixed farming.

Jackson Co.

MRS. JOHN LETTER, Cor. Sec.

MAPLE VALLEY FARMERS' CLUB.

Meeting held March 8th at the cozy little home of J. W. Durst and wife. Nearly all the evening was occupied in listening to the report of the State Round-Up Institute at Lansing by F. S. King.

Montcalm Co. MRS. F. S. K., Cor. Sec.

PROGRESS FARMERS' CLUB.

Mr. and Mrs. Irving Shaw entertained 100 members of this club on the 2nd inst. Question: "Are we satisfied with speakers from outside at farmers' gatherings?" The majority were satisfied with outside speakers, but were not in favor of the State appropriating money to pay them. Question, "Farmers' mutual fire insurance companies—How can they be improved?" This question interested all. The majority were in favor of giving the secretary a fixed salary and no fees. They were all opposed to the rebuilding clause regarding mortgaged property, with the exception of M. D. York and D. Graham. The majority favored an adjuster in each township.

Tuscola Co. MRS. F. A. BRADLEY, Cor. Sec.

NORTH NEWBERG FARMERS' CLUB.

March meeting held with Mr. and Mrs. A. Parmenter. Despite the bad roads fully 100 were present. The district school question, with its many phases, was the topic for discussion. The conclusion was that the district school is the school for the masses. Most important reform suggested, The doing way with the County Commissioner. Many thought something less expensive could be substituted in place of the present system. The best of feeling prevailed throughout. April meeting with Mr. and Mrs. Frank Sargent.

Shiawassee Co. FRANK WHELAN, Reporter.

WEST AVON FARMERS' CLUB.

Club met at Fred Newman's on March 8th and discussed Association question. S. C. Chambers leading. thought the secretary received too much pay. After considerable discussion the following was adopted: Resolved, that it is the sense of the West Avon Farmers' Club that it is advisable for the Monitor Insurance Company to employ only such agents as are competent to rightly appraise property, and that said appraisal shall be made at the time the property is insured, and that in case of total loss by fire the company shall in all cases pay the full amount called for in the policy. And further, that we advise the adoption of the salary system in place of the present fee system for paying all officials for their services.

A paper on "Current Events" by Mrs. L. W. Fisher followed. "What to me makes life worth the living?" was ably handled by F. Hilton. He said, "Hope is the great incentive to labor, and the Creator intended the lives of men to redound to the glory of God." Mrs. Flummerfelt, in discussing "The mistakes and failures of the ladies," thought she made a mistake in making too much rich food for her husband—too many cakes and pies—and advised young wives to cook plainer. The ladies all admitted making many mistakes. It was decided that male help can not be profitably dispensed with at housecleaning time.

Oakland Co.

TROY FARMERS' CLUB.

Club met at the home of Mr. and Mrs. Wm. Kimball March 5th. The report of the program committee was accepted and the programs were distributed, so that each will know when and where the meetings will be held, the subject for discussion and by whom it is to be discussed, for the year 1898. We claim the right of being the first club in the county to have such a program. A committee was appointed to select suitable singing books.

C. E. Hadsall led the discussion on "The Farmer's Fruit Garden," saying in part: "The farmer's fruit garden is the laughing stock of the people. If a farmer is to have small fruits he must raise them; he can not afford to buy them. The boy who is not supplied at home helps himself wherever he can and no law will punish him, and the Angel of Justice will deal gently with the lad. The remainder of the family go without. Soil, culture and variety must have due consideration as well as the smooth-tongued agent, who knows nothing of either, his object being to sell—the people as well as his trees." The Knippen renewal and half-renewal pruning system was practically illustrated by the use of a vine. Others took part in the discussion. Next meeting at the home of Mason Leonard April 2nd.

MRS. GEO. ELLIOTT, Cor. Sec.

HILLSDALE-LENAWEE HORTICULTURAL SOCIETY.

met March 3rd with Bert Bump and wife. S. E. Cooper ably discussed the topic, "Farm management and how it should be conducted." His farm is of a gravelly, loamy soil, and his suggestions are in accordance thereto. Clear of all hedge rows, brush, etc., even on the roadside. Lay out in six fields of uniform size, each opening to a lane, which should run through the farm from front to back. Would also have yards and small fields about the buildings. Raise fruit of different varieties for home use, but none for sale. Plow six inches deep. Cultivate thoroughly. Top-dress with manure in winter for corn. Rotation: Corn, oats, and wheat top-dressed with manure; timothy sown in fall and clover in spring; then mow for two years. Keep enough stock to eat all crops raised and sell only finished products. Mr. Cooper keeps about 200 hens and considers wheat at \$1 per bushel as cheap as anything in a mixed ration.

"Do Experiment Stations Pay?" was the subject of Leonard Loomis. He argued that experiments are necessary and that to be valuable they must be conducted through a term of years. It is impossible for the practical farmer to do this, hence the stations are necessary. The majority present who discussed the paper agreed with him.

The subject of "Club Extension," introduced by Orin O'Harrow, resulted in a determination to encourage the formation of new clubs, although there is a strong unwillingness to weaken our own club by so doing. We stand ready to send a committee

to adjacent territory and assist in any way we can.

"What Are Woman's Rights?" was the subject of an interesting paper and discussion, in which our ladies seemed to prefer social and domestic advantages to the life and drum notoriety of political preferment.

ORIN O'HARROW, Cor. Sec.

Hillsdale Co.

WALES FARMERS' CLUB.

"Which is the most profitable stock to keep on the farm?" was the topic for discussion at the March meeting. The greater number decided in favor of sheep, where the farm is adapted to raising them. Matthew Hubbell liked sheep, but would keep cattle, because it did not need a special act of Congress to boom prices for them. James Dunn had made most money out of hogs during the last five years. Mr. Gregg found cows most profitable, but if hens were to be considered stock, he thought they would yield greater profit.

MRS. ALBERT HAND, Cor. Sec.

St. Clair Co.

MONTICALLY FARMERS' CLUB.

We had an enthusiastic meeting at Butternut on the 1st inst., with over 100 in attendance. The question of uniformity of text-books was discussed to some extent. Opinion was divided on the subject. A little politics was mixed into the next discussion which we were sorry to see. The question box proved exceedingly helpful.

Montcalm Co. E. W. JOHNSON, Sec.

NORTH PLAINS FARMERS' CLUB.

The meeting the 10th inst. was unusually interesting. A resolution was adopted expressing it as the sense of this club that it is derogatory to the interests of the U. S. to continue giving away the public lands. Messrs. Dickerson and Mason presented papers on "Peach Raising" and "Small Fruit" respectively; followed by one on "Clover," by Mr. Tibbets. The following resolution was unanimously adopted: Whereas, owing to the strained relations existing between the government of Spain and that of the U. S., Congress has voted an appropriation to be placed at the disposal of the President. Therefore, be it resolved by the North Plains Farmers' Club, that we admire the calm, conservative spirit manifested by the President, and extend to him our sympathy and hearty support.

"How to Better the District School," is the topic for the April meeting.

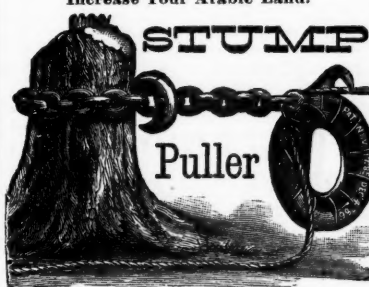
Ionia Co. MRS. D. S. WALDRON, Cor. Sec.

TYRONE FARMERS' CLUB.

March meeting well attended. A paper by Mrs. M. V. Salisbury on "Poultry Raising" was thoroughly discussed. The following resolutions were unanimously adopted by the club: Whereas, It has become apparent that there are in our midst individuals and corporations that do not share their just proportion of taxation; therefore be it resolved, That we heartily indorse every effort which has been or may be made to equalize taxation, so that every man or combination of men shall pay their just proportion of taxes; and be it further resolved, That our State Senator and Representative be and are hereby requested to use their influence to that end. And further, that all railroads doing business in this State should have a uniform passenger rate of two cents per mile. Resolved further, That a copy of these resolutions be sent to The Michigan Farmer for publication, and also to our State Senator and Representative.

Livingston Co. A. W. SMITH, Cor. Sec.

Increase Your Arable Land.



There are several well known ways of increasing the arable land of the farm. One plan which, everything considered, offers the greatest advantages, is the clearing off of timber land. Nearly the whole of the difficulty heretofore existing in the clearing up of land has been obliterated by the invention of a machine, a cut of which we show herewith. This is the Hawkeye Grub and Stump Machine manufactured by the Milne Mfg. Co., of Monmouth, Ill. The reader will observe that this is not merely a stump puller, for while it will pull a stump of any size green or dry, it will also pull trees and grubs up by the root. In fact it completely cleans the land and does away entirely with the use of the old hand matted or grub hoe. If you have been paying taxes on a piece of timber land that is yielding no returns, clear it up and make it pay its share of the expenses of the farm. You will find this machine an almost invaluable help. Write the manufacturers for catalogue, testimonials, prices, etc.

OVER-WROUGHT NERVES OF WOMEN.

Extracts From Letters Received by Mrs. Pinkham.

"I am so nervous and wretched." "I feel as if I should fly." How familiar these expressions are. Little things annoy you and make you irritable. You can't sleep, you are unable to lift ordinary burdens, and are subject to dizziness.



That bearing-down sensation helps to make you feel miserable.

You have backache and pains low down in the side, pain in top of head, later on at base of the brain.

Such a condition points unerringly to serious uterine trouble.

If you had written to Mrs. Pinkham when you first experienced impaired vitality, you would have been spared these hours of awful suffering.

Happiness will be gone out of your life forever, my

sister, unless you act promptly. Procure Lydia E. Pinkham's Vegetable Compound at once, and begin its use, then write to Mrs. Pinkham, at Lynn, Mass., if there is anything about your case you do not understand.

You need not be afraid to tell her the things you could not explain to the doctor, your letter is seen only by women and is absolutely confidential. Mrs. Pinkham's vast experience with such troubles enables her to tell you just what is best for you, and she will charge you nothing for her advice.

Mrs. JENNIE BIERLY, Youngdale, Pa., writes:

"DEAR MRS. PINKHAM:—Will you kindly allow me the pleasure of expressing my gratitude for the wonderful relief I have experienced by taking your Vegetable Compound. I suffered for a long time with nervous prostration, backache, headache, loss of appetite, a heavy bearing-down feeling, also burning pains in the groins. I could not sleep, was tired all the time, had no ambition. Life was a burden to me. The pains I suffered at times of menstruation were something dreadful. I thought there was no cure for it. I saw your advertisement in the paper, and my husband advised me to try your medicine. I took five bottles, and now I am well and happy. Your medicine saved my life."

A Million Women Have Been Benefited by Mrs. Pinkham's Advice and Medicine

...A...
FREE FARM

of the best quality, Rich soil, on the "Soo" Railway in North Dakota, On Streams and Lakes, Coal one dollar a ton. Your last chance to secure a government free homestead of 160 acres.

ALSO

CHOICE HARDWOOD TIMBER LANDS IN WISCONSIN AND MICHIGAN.

Black Soil, Near Stations, \$3.00 to \$5.00 per acre, a Clover and Dairy Country.

Also Rich Low Priced Prairie Lands in MINNESOTA and NORTH DAKOTA.

For illustrated Book and Maps, FREE Write to

D. W. CASSEDAY, Land Agent "Soo" Railway, MINNEAPOLIS, MINN.

\$5 1898 BICYCLE \$5

to anyone who will distribute a few of our BIG 3-POUND BICYCLES. We Sell Outright new high grade '98 GUARANTEED BICYCLES. YOU DON'T PAY FOR BICYCLE until after you get it. WRITE TO-DAY FOR SPECIAL \$5.00 OFFER and HANDSOME BICYCLE CATALOGUE. SEARS, ROEBUCK & CO. (Inc.) CHICAGO, ILL. (Sears, Roebuck & Co. are thoroughly reliable.—Editor.)

SHIPPED ON APPROVAL without a cent payment. Sewell's Bicycles, \$14 to \$17.50, 1200 on hand for spring trade. 600 SHOPWORN and used wheels, \$8. to \$12. BICYCLE FREE for the season to agents: write for particulars. EARN A BICYCLE and make money by a little work in your locality. Special proposition to early applicants. WE OFFER THIS WEEK—100 New '97 Boys' and Girls' Bicycles, \$10.00 each. Write for Art Catalogue and information free. MEAD & PRENTISS, 146 Ave. N., Chicago.

MIXED PAINTS 45c. We Ready Mixed Flat, all colors, Guaranteed highest grade made at 45 cents and up per gallon. For our handsome color card, full particulars and our easy pay-after-received terms CUT THIS AD OUT and send to SEARS, ROEBUCK & CO. (Inc.) CHICAGO, ILL.

AGENTS WANTED for the State Mutual Cyclone Insurance Co. Only reliable parties who will devote a considerable part of their time to the business wanted. Apply with references to the SECRETARY, Lapeer, Mich.

LANE'S Steel Carriage Jack Ask your hardware dealer. Makers Lane Bros., Foughkeepsie, N. Y.

A GOOD CHANCE

TO BUY A FARM OF 160 ACRES. Good soil and buildings; living water; right for stock. Near station on R. R., school and church. Terms easy. Address J. B. care of C. O. THOMPSON, Ionia, Mich.

FARM FOR SALE.

Good buildings; well kept; excellent water; 80 acres; three miles from market. A. & O. BAXTER, Muskegon, Mich.

STOCK FARM FOR SALE.

One of the best farms in State of Michigan, containing 1,360 acres; 300 acres improved; good and ample buildings; six flowing wells and river; 8 miles from market in good country. Must be sold to close business of corporation. Is offered dirt cheap. Write us for full particulars.

UNION ABSTRACT CO., Saginaw, W. S., Mich.

Why Not Secure Yourself a Home?

20,000 ACRES of Farming Lands for Sale, in Isabella county, Central Michigan. Long time. Easy payments. Titles perfect. Good roads; good schools and churches; near to postoffice; best market in Michigan. Prices—\$3 to \$8 per acre. Terms—\$1 per acre cash, balance in five yearly payments. Interest 6 per cent. Write to JOHN S. WEIDMAN, Weidman, Mich.

EARN \$35 A WEEK. WE WANT RELIABLE MEN

In every locality, local or traveling, to introduce a new discovery and look after our advertising. No experience needful. Steady employment. Salary or commission. \$65.00 a month and \$2.50 a day expenses. Money deposited in any bank at start if desired. Write at once. Globe Medical Electric Co., Buffalo, N. Y.

1898 High Grade BICYCLES

for Men, Women, Girls & Boys. Complete line. All brand new models. \$75 "Oakwood" for \$22.50 \$60 "Arlington" for \$24.50 Others at \$15, \$17 and \$20. WRITE TODAY for SPECIAL OFFER. Juveniles \$7.00 to \$12.50. Shipped anywhere C.O.D. with privilege to examine. Buy direct from manufacturers, save agents' and dealers' profits. Large Illus. Catalogue Free. CASH BUYERS' UNION, 163 W. VanBuren Street, B-517, Chicago, Ill.

WANTED NOW. AGENTS AT ONCE to sell Sash Locks and Door Hangers. Sample Sash Lock free for 3-cent stamp. Immense; better than weights; burglar proof. \$10.00 a day. Write quick. Address BROHARD & CO., Dept. 111 Philadelphia, Pa.

Wabash Line THE SHORT ROUTE

Chicago, St. Louis & all points West.

Home-seekers and California tourists write R. G. BUTLER, D. F. & P. A., 9 Fort St. West, (Hammond Building.)

GRAND TRUNK RAILWAY SYSTEM.

Depot, foot of Brush St. City office, 84 Wood ward Ave. Telephone 39.

Lvs.	EAST VIA PORT HURON	Arr.
7:55 am	Mt. Clemens, Pt. Huron & North	9:45 am
10:15 am	Toronto, Montreal & Portland	9:05 pm
1:10 pm	Mt. Clemens, Pt. Huron & North	
	Montreal, New York, etc.	1:50 pm
4:20 pm	St. Clair, Romeo and Pt. Huron	8:10 pm
10:40 pm	Buffalo, Toronto and New York	6:45 am

EAST VIA WINDSOR.

Lvs.	Toronto, Buffalo and New York	Arr.
12 noon	Toronto and Int. Stations	1:50 pm
6:40 pm	London and Int. Stations	8:30 pm
	London and Int. Stations	9:05 am

DETROIT AND MILWAUKEE DIVISION.

Lvs.	Saginaw, G. Haven & Milwaukee	Arr.
6:55 am	Pontiac and Int. stations	9:25 pm
9:15 am	G. Rapids, Milwaukee & Chicago	2:00 pm
11:30 am	Saginaw, Lansing & G. Rapids	3:55 pm
4:45 pm	Pontiac & Intermediate stations	11:50 am
8:30 pm	Lansing, Battle Creek & Chas.	8:10 pm
10:00 pm	Grand Rapids, Grand Haven.	7:05 am

†Daily except Sunday. *Daily. ‡Sunday only.

Farmers! One Question!

HALLOCK'S SUCCESS

ANTI-CLOG WEEDER and CULTIVATOR

READ THE TESTIMONY:

Messrs. D. Y. HALLOCK & SON, York, Pa.

Gentlemen—Last season I used one of your Success Anti-clog Weeder. Bought it of my brother, R. H. Jones, and I wish to let you know how much pleased I am with the Weeder. One of my neighbors was afraid to buy, but he was not afraid to borrow. He borrowed mine and said he went over his turnips with it and was very much pleased with the Weeder and the good work it did.

For myself I can say a great deal of my corn—never saw a hoe in the field during the entire season. One piece I planted a little too thick; so when it was about one foot high I wished to thin it out so it would ear better. So I took the Weeder and started in; went lengthwise and crosswise, and every other way that I could drive my horse, thinking it might break off some of the stalks; but I can safely say that I did not break off two stalks in the whole field.



Patent Allowed

Before I had commenced to use my Weeder many of my neighbors thought that it would tear up the corn and potatoes. But after they had seen me give it this thorough trial they were convinced that it would not harm the corn in the least. The fact is, I am sure the Weeder will not injure any crop grown on the farm. It is very important, however, that the Weeder be started early. If the weeds are allowed to get a good start the Weeder will simply cultivate them, as it does the crop.

Yours truly, W. R. JONES.

CENTER, N. Y.

Messrs. D. Y. HALLOCK & SON,

Gentlemen—How about the price of your Weeder for the coming season? Is it the same as last year? I intend to sell quite a good many. I used the Weeder I purchased of you last year on everything I raised, including even onions, and it worked to perfection on everything. I can honestly say I would not be without it for \$50, if I could not get another just like it.

Yours truly, T. B. NICHOLS.

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Messrs. D. Y. HALLOCK & SON, York, Pa.

Dear Sirs—I intend to sell just as many Weeders as I can this Spring. I bought one last Spring for my own use and they are certainly a complete success, and I would not think of farming without one. Last Spring, in April, I contracted to cut and haul to the saw mill a lot of lumber; so I took all my men away, leaving only my fourteen year old boy on the farm. Now, I will tell you what he did. He took the entire care of thirty-five acres of corn and twelve acres of potatoes, working both crops entirely with the Weeder, and I never saw a finer crop in my life.

The secret of Success in using your Weeder is to start it early, before anything grows, and keep the soil stirred so no weeds will grow. No farmer can afford to farm without a Weeder, and all will own one just as soon as they realize its value.

Yours truly,

HEZEKIAH GONGAMERE.

Messrs. D. Y. HALLOCK & SON, York, Pa.

Dear Sirs—Your favor of recent date, wishing to know if I am going to handle the Success Anti-clog Weeder the coming season received. I certainly am if you will permit me to, and I intend to push them for all they are worth.

I let my Weeder go wherever the farmers wanted to try it, and they all pronounced it a grand success; declared that it did fine work. The Weeder that I kept for my own use I would not take \$20 for if I could not get another just like it.

I sold one Weeder to a neighbor near by very late in the season, and I will tell you what he did with it. He planted one acre of potatoes quite late, and he tended them entirely with the Weeder until he went to hill them up, and spent but five hours work all told on the acre of potatoes. He told me he kept the time carefully that he spent in cultivating them. Said he started the Weeder before they were up, and went over the potatoes frequently.

Yours truly, J. W. HARDIN.

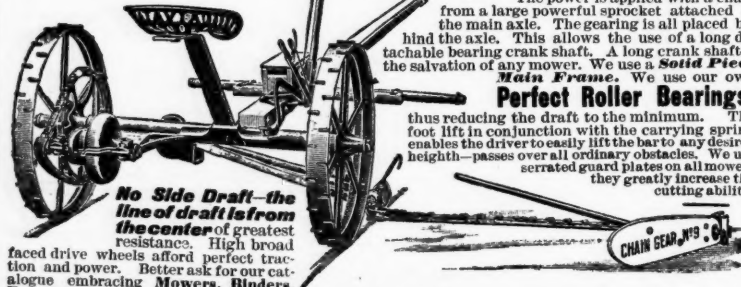
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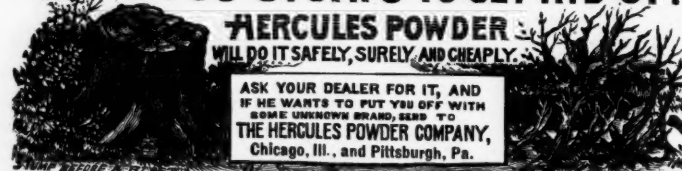
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Scientific Economy Fertilizer.....	11 to 12	3 to 4	4 to 5	20 00 "
Scientific Tobacco Fertilizer.....	9 to 10	3 to 4	4 to 5	21 00 "
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